

A Analysis of Workbooks in ECONOMIC Geography.

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Thesis

AN ANALYSIS OF WORKBOOKS IN ECONOMIC GEOGRAPHY

Submitted by

Robert Emmett Sheehan

(B. S., Boston University, 1949)

In partial fulfillment of the requirements for
the degree of Master of Education

1949

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Sincere appreciation is hereby
extended to Professor Lester I. Sluder
for his untiring effort and guidance
in directing this study.



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TABLE OF CONTENTS

CHAPTER	PAGE
I INTRODUCTION TO THE PROBLEM.....	1
Statement of the Problem.....	1
Analysis of the Problem.....	1
Delimitation of the Problem.....	2
Definitions of Terms.....	3
Justification of the Problem.....	6
II REVIEW OF RELATED INVESTIGATIONS.....	7
III REVIEW OF RELATED LITERATURE.....	17
IV PROCEDURE OF THE STUDY.....	28
V RESULTS OF THE SURVEY.....	32
VI SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....	74
Summary and Conclusions.....	75
Recommendations for Further Study.....	77

LIST OF TABLES

	PAGE
WORKBOOK ANALYSIS TABLES OF COMPONENT ELEMENTS	
TABLE I INVESTIGATIONS IN INDUSTRIES AND RESOURCES.....	34
TABLE II WORKBOOK FOR THE WORKING WORLD.....	36
TABLE III STUDIES IN ECONOMIC GEOGRAPHY.....	38
TABLE IV ACTIVITIES NOTEBOOK.....	40
TABLE V GLOBAL GEOGRAPHY FOR HIGH SCHOOLS.....	42
TABLE VI WORK-TEST BOOK.....	44
TABLE VII PROBLEMS IN ECONOMIC GEOGRAPHY.....	46
TABLE VIII WORKBOOK FOR USE WITH ECONOMIC GEOGRAPHY.....	48
TABLE IX COMPARATIVE TABLE OF THE COMPONENT ELEMENTS IN EIGHT WORKBOOKS.....	50

LIST OF FIGURES

	PAGES
FIGURE 1 CUMULATIVE CHART OF EIGHT WORKBOOKS.....	51
COMPARATIVE GRAPHS OF COMPONENT ELEMENTS	
FIGURE 2 GENERAL ACTIVITIES.....	52
FIGURE 3 CHARTS.....	53
FIGURE 4 CHART EXERCISES.....	54
FIGURE 5 CLASS REPORTS.....	55
FIGURE 6 COMPLETION ITEMS.....	57
FIGURE 7 DEFINITIONS.....	58
FIGURE 8 DIAGRAMS.....	59
FIGURE 9 DIAGRAM EXERCISES.....	60
FIGURE 10 GRAPHS.....	61
FIGURE 11 GRAPH EXERCISES.....	62
FIGURE 12 LISTING EXERCISES.....	64
FIGURE 13 MAP OUTLINES.....	65
FIGURE 14 MAP EXERCISES.....	66
FIGURE 15 MATCHING ITEMS.....	67
FIGURE 16 MULTIPLE-CHOICE ITEMS.....	68
FIGURE 17 MULTIPLE-RESPONSE ITEMS.....	70
FIGURE 18 PHOTOGRAPHS.....	71
FIGURE 19 STUDY QUESTIONS.....	72
FIGURE 20 TRUE-FALSE ITEMS.....	73

CHAPTER I

INTRODUCTION TO THE PROBLEM

The purpose of this study was to make a survey of the activities provided for high school students in eight workbooks in economic geography.

Analysis of the Problem

After carefully analyzing research and publications in the field of workbooks, the following sub-problems were formulated in order to obtain a more comprehensive solution to the major problem. These sub-problems were:

1. To contribute specific data for evaluating the content of workbooks in economic geography.
2. To determine to what extent workbooks can aid pupils to study more economically and effectively.
3. To make a comparison of the kinds of activities found in these workbooks.
4. To determine the number and types of teaching aids which these workbooks provide, such as maps, graphs, and illustrations.
5. To provide data in graphic form which will enable teachers to interpret easily the physical construction of workbooks in economic geography.

Delimitation of the Problem

In order to guide effectively the learning process of pupils in economic geography, teachers must be made aware of the teaching-learning tools with which they are working. Workbooks have become very prominent in this subject matter field.

This study does not attempt to solve the so-called "evils" of using workbooks, but it is limited to the presentation of scientific, objective data concerning the activities that are presented in eight workbooks in economic geography.

Definition of Terms

The Dictionary of Education¹ defines a workbook as follows:

1. A study or learning guide for pupils often related to a particular textbook or to several textbooks; may contain exercises, problems, practice materials, directions for use, space for recording answers, and frequently, means of evaluating the work done.
2. A supplementary or preparatory exercise or practice book in reading, used to give additional training not found in basic reading materials.

Jones² defines economic geography as a study which

¹Good, Carter V., Editor, Dictionary of Education, McGraw Hill Company, New York, 1945, p.453.

²Jones, Clarence F., Economic Geography, The Mac Millan Company, New York, 1941, p. 7.

"embraces a consideration of hunting, fishing, grazing, forest industries, mining, manufacturing, transportation, and trade."³

According to Ridgley,⁴ the purpose of economic geography is "to help the American youth to become acquainted with everyday surroundings and to sense the influence of these surroundings on current economic and social activities."

After a thorough investigation, the writer of this paper listed 19 component elements which were used as the basis for this study. These elements were defined and tabulated as follows:

General Activities - include advertisement writing; current events collections; check lists completion; exercise construction; free-hand drawing; library research; map construction (where an outline map is not provided); picture collections; recording weather cycle; outline development; picture studies; menu development; mathematical problems; debates; exhibits developed by students; experiments; field trips; planting seeds; poster construction; sample collections; and outside reading assignments. One unit is scored for each activity.

³ Ibid., p. 7.

⁴ Ridgley, D. C., Ekblaw, S. E. and Means G. R. Influence of Geography on our Economic Life, Gregg Publishing Company, New York, 1938, p. iii.

Charts - includes all information that was given in tabular form. One unit is scored for each chart that appeared.

Chart exercises - one unit was scored for each chart that the student is required to complete and/or construct.

Class reports - include all statements that were referred to the student for oral preparation. One unit was scored for each statement.

Completion - include all statements that called for short one or two-word answers, or short phrase answers.

Definitions - include all exercises that asked for the explanation of the meaning or meanings of a word. One unit was scored for each word the student is required to define.

Diagrams - include all outline explanatory illustrations. One unit was scored for each diagram that appeared.

Diagram exercises - one unit is scored for each diagram the student was required to complete.

Graphs - include all material presented in graphic form. One unit was scored for each graph that appeared.

Graph exercises - one unit is scored for each graph that the student is required to complete and/or construct.

Listing - one unit is scored for each list of names, places, objects, and products that the student was required to create.



Map outlines - include any blank maps. One unit was scored for each map that appeared.

Map exercises - one unit was scored for each composite map activity that the student was required to perform.

Matching items - includes all exercises in which student must pair items in one column with related items in a second column which is arranged by chance. One unit was scored for every stimulus.

Multiple-choice items - include all items to which the student responds by attempting to select the correct response from the several alternatives given. One unit was scored for each item.

Multiple-response items - include all items to which the student responds by indicating all correct answers, of which there may be one, two, or more. One unit was scored for each response.

Photographs - include all pictures or likeness obtained by photography. One unit was scored for each photograph that appears.

Study questions - include all exercises to which the pupil is required to think out the question carefully and then organize his answers accordingly. One unit was scored for each statement to which the student is required to think out an answer.

True-False questions - includes all items to which the student responds by indicating whether a statement is true or false. One unit was scored for each response.

Justification of the study

Economic geography is a required subject in almost every high school business education program. Insofar as this writer can determine, there has been no previous study made of economic geography workbooks. In view of the fact that "the sales of workbooks in 1946 approximated 37 million copies and that workbooks and test material now consume nearly 25 per cent of the instructional budget,"⁵ this study appears justifiable. The exact number of economic geography workbook sales is not available.

⁵Johnson, W. P., "Then Came the Workbook," Journal of Education, vol. 131, February, 1948, p. 64

CHAPTER II

REVIEW OF RELATED INVESTIGATIONS

In view of the fact that according to best estimates the "sale of workbooks and test material now consume nearly 25 per cent of the instructional budget," the amount of research concerning workbooks is amazingly small.

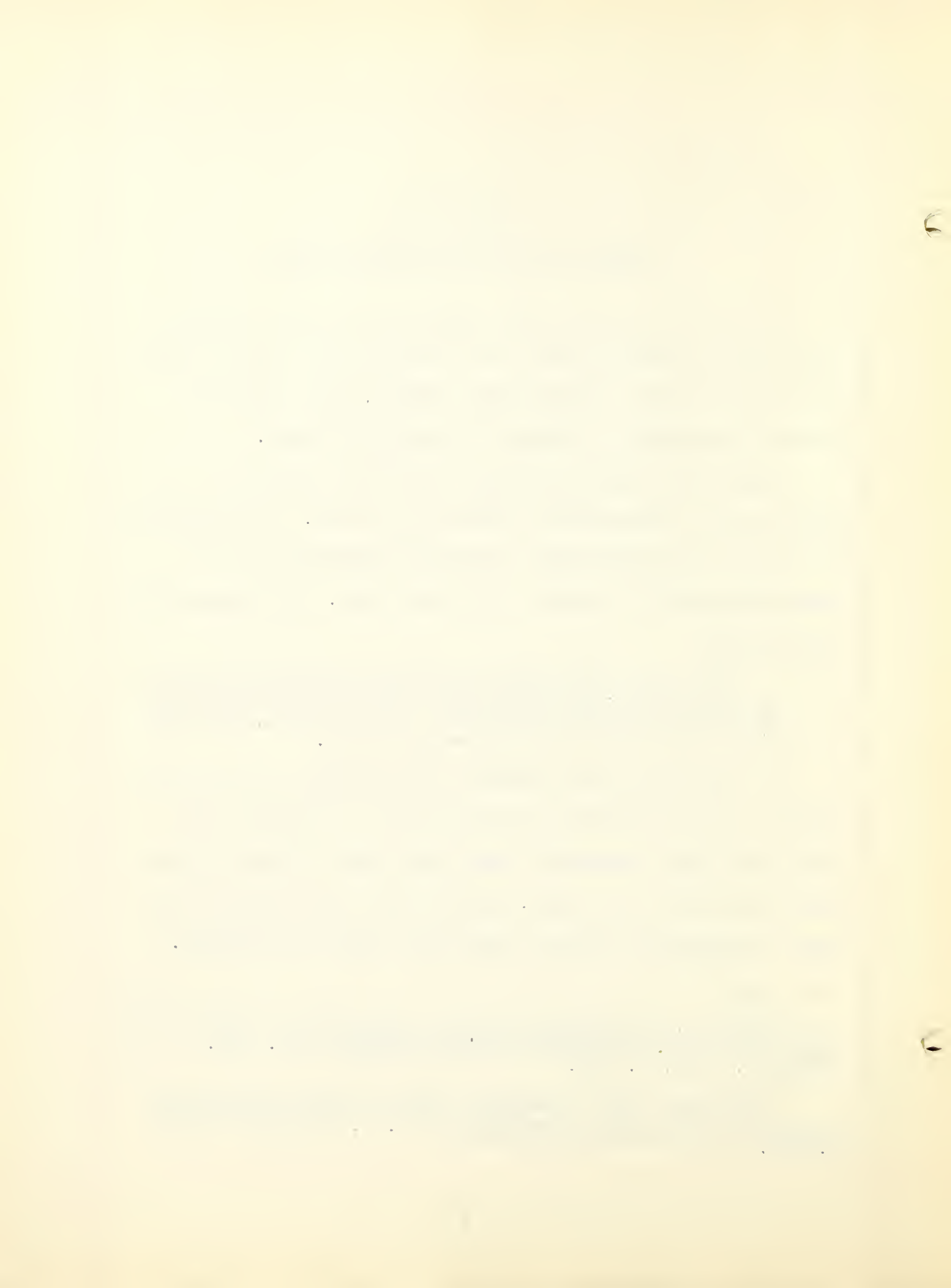
Among the first experiments published concerning workbooks was one conducted in 1930-1931 by Hurd,¹ who attempted to compare the conventional textbook-recitation plan of instruction with a special work-sheet plan. The author concluded that:

In some schools the differences clearly favor the worksheet plan; in others they favor just as clearly the textbook recitation plan. On the whole, the margin is in favor of the work-sheet plan.

In determining the relative effectiveness of workbooks and the oral-presentation methods in the acquisition of moral knowledge, Cressman² found that "the workbook method seems superior to the oral, particularly in getting transfers to materials different from those used in training."

¹Hurd, A., "A Textbook Versus Workbooks in Instruction," Educational Administration and Supervision, vol. 171, December, 1931, p. 661.

²Cressman, Elmer, "Workbook Versus Oral Instruction," Journal of Educational Sociology, vol. 7, December, 1933, p. 253.



Peterson³ conducted an experiment to evaluate the efficiency of published workbooks versus pupil-made notebooks in ninth grade general science and while the findings suggested the probable but slight superiority of the notebook technique, the author felt that "one teacher may secure better results by use of workbooks and another by use of notebooks" and that the pupil-made notebook "is slightly better for pupils with lower IQ's and the workbook for pupils with higher IQ's." ⁴

Tryon,⁵ in sampling the opinions of a limited number of teachers, superintendents, and professors of education on workbooks, found that:

Sixty per cent of those individuals justified the workbook on the basis of its provision for the acquisition of habits and skills, 58 per cent on the basis of economy of time, 54 per cent on individualization of instruction, 53 per cent on providing a more efficient teaching organization, 40 per cent on building a specific vocabulary, 32 per cent on simplifying examinations, and 31 per cent on the basis on practice material provided.

In a detailed study of 73 workbooks in arithmetic made to determine the extent to which the content and the usage of these materials were in accord with conditions accepted

³Peterson, G. W., "Published Workbooks Versus Pupil-Made Notebooks in Ninth-Grade General Science," School Review, vol. 43, October, 1935, p. 608.

⁴Ibid., p. 608.

⁵Tryon, Kolla W., "The Development and Appraisal of Workbooks in the Social Studies," School Review, vol. 46, January, 1938, p.25.

as being favorable to learning, Andreen⁶ made the following summary:

There is a great difference in the character and quality of workbooks. The study reveals further that only a small percentage of the workbooks can be characterized as self-administering materials. Controlled observation of the classroom usage of these materials, however, reveals that a majority of the teachers depend upon them to the extent that their own personality is almost entirely removed from the teaching-learning situation. Analysis of the content of workbooks gives evidence that these printed materials are not capable of providing this situation. Teachers who assign the teaching function to a printed page within a workbook are not giving the optimum of learning service to their pupils.

In determining the relative amount of emphasis given by 43 authors of history workbooks to particular abilities, Mead⁷ found that "a total of 23,840 learning exercises" with "42.3 per cent devoted to ability to collect data. The next four in order of frequency were remembering, expressing one's self, observing, and organizing in that order." Mead concluded that the "neglect of problem solving abilities persists in spite of the warning of psychologists and experts on the subject of study" and that an improper relationship between reading and other abilities is demonstrated as the "writers of workbooks

⁶Andreen, Earl, "Study of Workbooks in Arithmetic," Journal of Educational Research, vol. 32, October, 1938, p. 114.

⁷Mead, Vera A., "What Abilities are Stressed in Workbooks in History," School Review, vol. 47, April, 1939, p. 284.

assume reading to be four times more important."⁸

A questionnaire study on the use of reading workbooks conducted by a committee of the Association for Childhood Education reported by Betts⁹ revealed that:

Ninety per cent of the supervisors and principals and 86 per cent of the teachers reported a desire to make regular or occasional use of reading workbooks. That workbooks are used widely is evident by the report that they are available in 87 per cent of the situations reported upon by principals and supervisors and in 66 per cent of the situations represented by the classroom teachers. Twenty-nine per cent of the classroom teachers reported the use of workbooks to keep the children busy or quiet. In the minds of the teachers the three most important specific values of reading workbooks were to provide necessary review and to fix vocabulary, to improve comprehension and to teach the child to follow directions. The chief objection to the use of reading workbooks reported by teachers were the cost, failure to provide for individual needs, and the amount of time required for supervision."

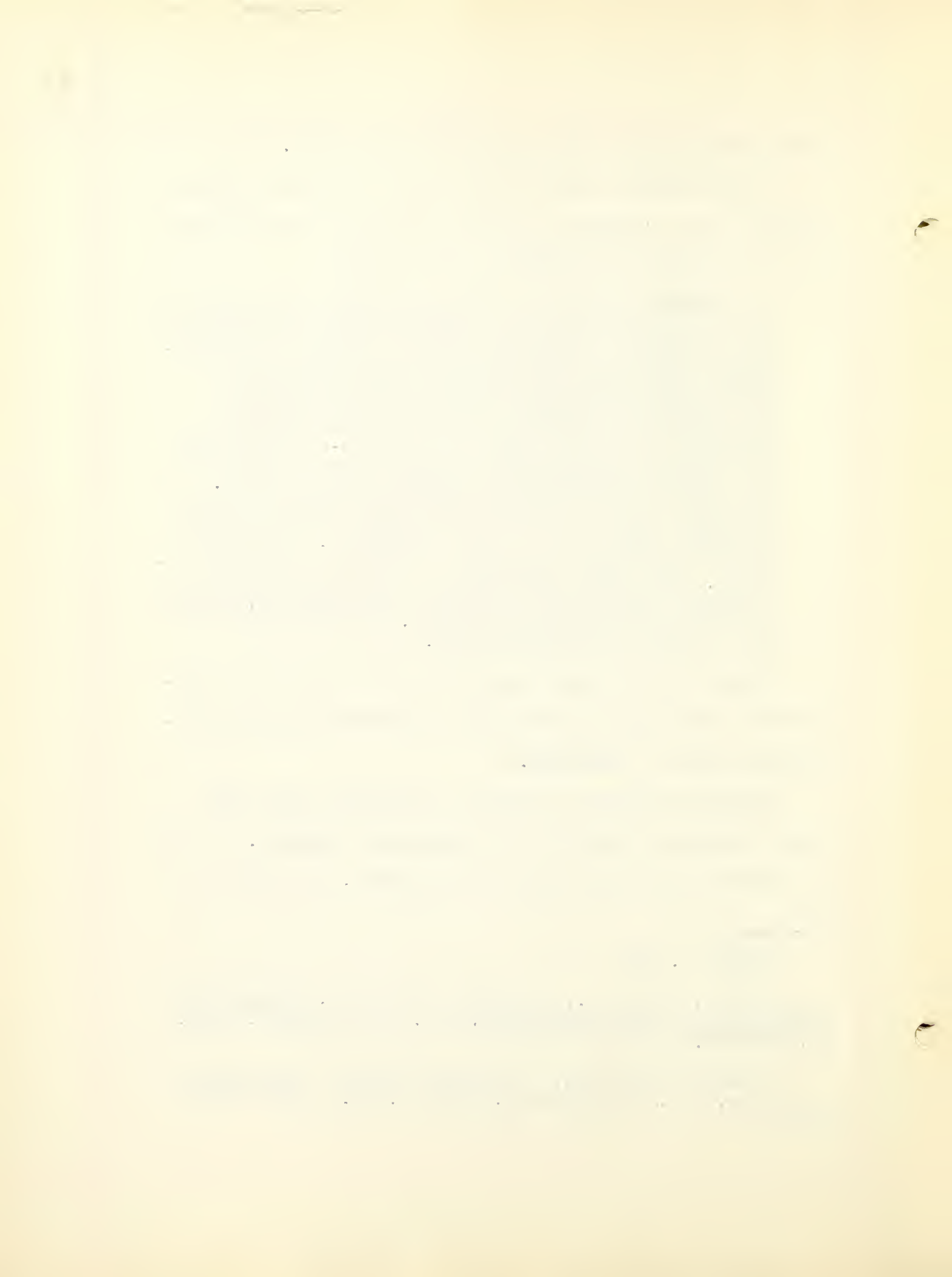
Betts felt that this report is one of the first substantial challenges to those who complacently make indiscriminate use of workbooks.

Brown¹⁰ conducted a survey to determine what high school students thought of the published workbook. Of the 155 students participating in this survey, all had used a

⁸Ibid, p. 284

⁹Betts, Emmett A., "Workbook Situation," Educational Administration and Supervision, vol. 27, November, 1941, pp. 372-373.

¹⁰Brown, Frederick, "Workbooks Wanted," The School Executive, vol. 61, February, 1942, p. 31.



workbook in the secondary school, 94 per cent had also used a workbook in the elementary school, and 145 students were using a workbook at the time of reporting. The student responses to a check list of advantages and disadvantages of the workbook found "over 83 per cent of the group favored it very much; 46 per cent to a moderate degree; 17 per cent disliked workbooks."¹¹

Zetes¹² compiled research in analyzing eight workbooks in world history and found that the authors devoted 23 per cent of all the exercises to the recall type of question, more than two and two-tenths times that given to any other activity. His data indicated that:

Recall questions, study questions, and map locational items, in that order, are among the first three component elements stressed. These absorb nearly 44 per cent of all the units, the first two of these component elements are commonly recognized as part of an attempt to direct the student in his reading.

In a survey to determine what materials workbooks in U. S. history contain and how they are organized, Megas¹³

¹¹Ibid, p. 31

¹²Zetes, Christie, "An Analysis of the Content of World History Workbooks on a Senior High School Level," Unpublished Master's Thesis, Boston University, 1948, p. 70.

¹³Megas, Nicholas, "An Analysis of World History Workbooks on a High School Level," Unpublished Master's Thesis, Boston University, 1948, p. 104.

found that the most frequently used exercises are of the recall variety, and that the majority of workbook authors favor the use of the completion type of exercise.

Cronin's¹⁴ analysis of ten workbooks in American history showed 19,496 opportunities for learning activities. The total number of opportunities ranged from a low of 1,200 to 3,458. Of all the opportunities, 22.76 per cent were in the recall area but even here the authors disagreed on the amount of emphasis that should be placed on this type of activity.

Comparing the values of the workbook method and the traditional method of recitation and discussion directed by the teacher, Motter¹⁵ equated two classes in regard to sex, chronological and mental ages, and taught them in the two different methods. Using achievement tests at the end of a three-month period, she found the net gain of the control (textbook-recitation method) group over the pre-tests to be 19.71 and the net gains of the experimental (workbook method) group to be 19.11 over the same series of achievement tests. Motter concluded that "for the teaching of

¹⁴Cronin, Margaret, "An Analysis of Workbooks in American History, Junior High School Level," Unpublished Master's Thesis, Boston University, 1948, pp. 78-79.

¹⁵Motter, George A., "Teacher Assignment Versus Workbook Assignment," School Review, vol. 47, January, 1949, p. 47.

factual matter in the social sciences, there is no significant difference between the values of the workbook method and the teacher directed method of notebook work and class discussion and recitation."¹⁶

Warren,¹⁷ in comparing the workbook with the pupil notebook method in eighth-grade American history classes, found the former inferior in developing knowledge and understanding but slightly superior in developing attitudes. Her conclusion stated that:

By comparison of mean scores made on final tests of facts by the notebook group and by the workbook group, it is evident that there was no significant difference or gain for either group.

In developing a score card for rating elementary business training workbooks, Moody¹⁸ apportioned a total of 1000 points to four main divisions of the workbook (Format and Mechanical Features, Organization, Content, and Materials, Provision for Individual Differences, and Reviewing and Testing) and listed several objectives under each main topic. Twenty experienced teachers of elementary business training participated in the study and this jury

¹⁶Ibid., p. 47

¹⁷Warren, Mary F. "Relative Values in the Use of the Workbook and the Notebook in the Teaching of American History," Unpublished Master's Thesis, Colorado State College of Education, 1937, p. 92.

¹⁸Moody, Ivy, "The Development and Application of a Score Card in Evaluating Workbooks in Elementary Business Training," Unpublished Master's Thesis, Oklahoma Agricultural and Mechanical College, 1939, p. 36.

decided that the weights of the main divisions should be as follows:

Format and Mechanical Features-----	139 Points
Organization, Content and Materials-----	500 Points
Provision for Individual Differences-----	179 Points
Provision for Reviewing and Testing-----	182 Points

The mean raw score for each feature was then computed by multiplying the number judgments, which gave each feature the same numerical rating, and dividing the sum by the number of judgments--twenty.¹⁹

Thus the information obtained could be applied in the rating and selection of workbooks in elementary business training.

A study made in 1935 by the Society for Curriculum Study presented evidence that would place sanction upon the use of workbooks. This study was summarized by Goodykoontz as follows:

Though the benefits ascribed to the use of the workbooks were usually in terms of higher scores on standardized tests, other benefits enumerated included increase in power of self-direction, helps in retention, skill in fundamental processes, reasoning ability, and problem solving.²⁰

Umstattd²¹ made an analysis of workbooks in many different fields and found a wide assortment in the physical

¹⁹Ibid., p. 36.

²⁰Goodykoontz, Bess, "Current Uses and Effects of Workbooks," Journal of the Society for Curricula Study, vol. 6, April, 1945, p. 31.

²¹Umstattd, J. G., Secondary School Teaching, Ginn and Company, Boston, 1937, pp. 193-195.

characteristics and mechanics of these workbooks. In analyzing 29 workbooks in history he found that only six had objectives, nine had separate directions to teachers, four had diagrams, one had pre-tests, and none had diagnostic tests. In his summary, Umstattd expressed an opinion that not enough challenging problems and projects were included in workbooks.

Scott²² summarized studies made of various workbooks up to 1937 and found 57 such studies dealing with workbooks in many different fields of subject matter.

Of the 57 groups studied, 37 showed differences in favor of the use of workbooks, but only 11 of these are statistically significant. Three groups showed no differences, six of them statistically significant, in favor of the use of the textbook alone. For eight of the groups, there was an apparent difference in favor of the workbook.

Results of this survey led Scott to believe that the use of workbooks did not significantly affect the achievement of the groups using them.

Despite the large scale distribution and use of workbooks in the schools today, one can readily see by surveying the literature that very little research has been accomplished. Glancing over the research that does exist, a

²²Scott, Ira, "Is the Workbook Really Worth While?" The American School Board Journal, vol. 95, August, 1947, p. 27.

reader finds difficulty in obtaining a cogent conclusion due to the fact that one may obtain just exactly the type of conclusion to suit his purpose or substantiate his opinion. The writer believes that a very valuable type of research is that which analyzes the type of learning experiences that workbooks provide. This survey is directed with this aim in mind.

CHAPTER III

REVIEW OF RELATED LITERATURE

A wealth of subjective material concerning the values, disadvantages, desirable features, and advantages of the workbook has been found in educational publications over the past 25 years. The pages following give a sampling of the pros and cons as projected by leaders in the field.

Among the first to attack workbooks was Riggs,¹ who, in discussing the place of workbooks, states:

In our eagerness to be modern and forward, we should not lose sight of the fact that schools are responsible for training boys and girls for a place in life. . . we should be mindful that we do not send them from school as expert blank fillers.

One can give serious thought to the fact that perhaps teachers are making blank fillers out of students. It is true that good tools are an aid to education but some never learn how to use the tools properly no matter how good they may be. It is very easy to follow the path of least resistance. Much of the "busy work" that formerly found a useful place in primary education has been condemned as of little educational value.

¹Riggs, H. H., "Are We Making Blank Fillers Out of Students?" School Executive, vol. 51, March, 1942, p. 329.

In support of Rigg's statement, Carrothers² made the following comments:

If we are concerned primarily with getting young people to be clock punchers, to be routine factory workers running drill presses and other automatic machinery, or merely to be good cogs in our industrial machine, then the filling of blanks is not to be so greatly deplored. On the other hand, if a democracy is dependant for its success on the ability of citizens in general to do some thinking for themselves, then schools should be especially concerned with what workbooks are doing to children in their formative years. The situation is in need of thorough investigation.

We hear the term workbook in every grade of every school these days and the first part of the word is about the only place where 'work' is discovered in some classes. Possibly the name workbook is chosen for the same reason that the six-footer in the small village is called 'Shorty' because he is not.

The publisher of the first workbooks³ has said that:

The workbook is in its infancy. There are many possibilities for improvement, however, since it has been recognized by teachers and publishers as needed equipment for classroom instruction; the teachers and the publishers should work toward its improvement.

In discussing the advantages and disadvantages of using workbooks in bookkeeping, Lebeda⁴ has said that while

²Carrothers, George, "Workbooks," The Educational Digest, vol. 10, April, 1945, p. 32.

³Johnson, W. P., "Then Came the Workbook," Journal of Education, vol. 131, February, 1948, p. 64.

⁴Lebeda, Agnes, "Workbooks Versus No Workbooks," Balance Sheet, vol. 25, May, 1944, P. 461.

the advantages appear to be outweighed by the disadvantages, the disadvantages can be overcome. Her philosophy is that "workbooks are necessary in teaching bookkeeping."⁵

Jacks⁶ feels that the following arguments can be raised by the proponents of the use of workbooks.

1. It reduces the labor of the teacher and pupil.
2. It develops initiative and independence of the pupil.
3. Material is arranged in a more definite sequence than the plans of most teachers.
4. It puts proper stress on the important parts of the text.
5. It tests while it teaches.
6. It adjusts the instruction to individual differences.
7. It is less expensive.

Tyron⁷ expressed dissatisfaction over the use of workbooks in the social sciences as follows:

It may be truthfully said of most of the present workbooks in the social sciences that they reduce learning to a matter of doses; make children mechanical memorizers; reduce the teacher initiative, originality, and creativeness; contain too many trivial and unrelated facts; are overloaded with poorly graded exercises that are not cumulative in difficulty, it seems high

⁵Ibid., p. 461. .

⁶Jacks, Robert, "Status of the Workbook In Classroom Instruction," Educational Method, vol. 18, December, 1938, p. 106.

⁷Tyron, Rolla W., "The Development and Appraisal of Workbooks in the Social Sciences," School Review, vol. 46, January, 1938, p. 30.

time to bid good-bye to a type of teaching aid which is inherently incapable of being brought into life with recognized good teaching in the social sciences.⁸

Tyron⁹ feels that when the teachers assume the responsibility for making the guide sheets, the situation will be much more effectively handled than possible under the use of the workbook.

Kerr's¹⁰ reactions to workbooks were as follows:

Much of the stigma attached to workbooks would be obviated if their use were restricted to certain subjects. Any technique grows uninteresting with constant use and repetition. If workbooks are used in only one or two subjects, the children will enjoy them more, and the teacher, consequently, will find them of more interest value. The subjects in which workbooks should be used will vary with the individual group and from grade to grade.

The advantages of the workbook as observed by Gates¹¹ are:

1. The workbook saves the pupil time.
2. The workbook makes instruction adjustable to individual differences.
3. Programs which incorporate self-manageable activities in a workbook with group activities and with the usual kind of textbook reading and study prove to be more satisfying to pupils than anyone of these procedures alone.

⁸Ibid., p. 30.

⁹Ibid., p. 30.

¹⁰Kerr, Margaret, "Teaching with Workbooks," The Elementary School Journal, vol. 48, December, 1947, p. 221.

¹¹Gates, Arthur, "The Workbook in Practice," Nebraska Educational Journal, vol. 28, March 1948, pp. 70-71.

4. The workbook program, properly organized, leads to better integration and application of the information and skills acquired.
5. The workbook program develops skill in planning and executing activities and projects in managing one's own learning, in diagnosing and seeking remedies for one's own difficulties, and in acquiring other self-sustaining techniques.
6. The workbook program reduces a number of failures.
7. The workbook program is less expensive.¹²

Miller's¹³ suggestion is that the use of workbooks should be limited to the time "when they seem to be the best means of doing what we want to do." He feels that "if the books are worth the children's time, they should be worth checking by the teacher."

Crabbe and Salsgiver¹⁴ offer the following criteria for judging the value of workbooks in general business:

1. They should save a great amount of time both for the pupils and the teacher by providing the business forms and most of the writing space needed for the learning activities included in the assignment.
2. They should enable the pupils to attain the objectives of the course in a shorter space of time by providing the actual business forms needed to make their study realistic.

¹²Ibid., pp. 70-71.

¹³Miller, Edith F., "What About Workbooks?," American Childhood, vol. 32, December 1946, p. 63.

¹⁴Crabbe, Ernest H., and Salsgiver, Paul L., General Business Methods and Materials, South-Western Publishing Company, Cincinnati, 1947, p. 25.

3. They should add to the interest pupils take in their work.
4. They should encourage pupils to develop specific answers for many questions about which they might otherwise think in rather vague or general terms.
5. They should economize in the use of school supplies by providing a complete set of laboratory materials needed by pupils for effective study of the course.¹⁵

McGuire¹⁶ feels that workbooks should have a place in modern education because "they have a unique contribution to make to the learning process." She states further that any advantages gained from the use of workbooks "will be in direct proportion to the judgment displayed by administrators and teachers in selecting and using them."

The following criteria has been adopted by McGuire in the evaluation of workbooks:

1. The workbook should follow the well-established objectives of the subject matter.
2. It should be of interest to the pupils for whom it is intended.
3. It should be so planned that the accomplishment of the exercises is satisfying to the pupils.
4. It should provide precisely the types of learning units needed by the class in question.
5. It should be so organized as to require a minimum amount of teacher direction, and to permit to a large extent pupil self-direction.

¹⁵Ibid., p. 25.

¹⁶McGuire, Edna, "Teacher, Pupil, and Workbook," The School Executive, vol. 54, October, 1934, p. 47.

6. It should be well organized mechanically.

7. It should be economically priced.¹⁷

The characteristics of a good workbook defined by
Vreeland¹⁸ are:

1. The good workbook, other things being equal, tends to foster helpfully an intimate personal contact between pupil and teacher.
2. The good workbook utilizes as many as possible of the available materials and opportunities for experience.
3. The good workbook utilizes completely the findings of the scientific study of the learning process.
4. The good workbook provides adequately for maximum growth on the part of all learners, no matter what their types or general levels of maturity.
5. The good workbook stimulates in wholesome ways the assumptions of responsibility by the pupil for all aspects of his work.
6. The good workbook provides effective training in the techniques of self-diagnosis.

Criteria for the evaluation of reading workbooks established by Betts¹⁹ is:

1. Meaning rather than the mechanics of reading should receive major consideration.
2. Activities should be emphasized which facilitate the normal development of goal-seeking behavior rather

¹⁷Ibid., p. 47.

¹⁸Vreeland, Wendell, "A Good Workbook from the Teacher's Point of View," Nations Schools, vol. 18, July, 1946, p. 36-37.

¹⁹Betts, Emmett A., "Workbook Situation," Educational Administration and Supervision, vol. 21, November, 1941, p. 571.

than drills and exercises to insure a given number of repetitions.

3. A wide and interesting variety of worthwhile activities should be provided in order to recognize the various facts of the reading situations and to make possible adaption to individual needs and interests.
4. The workbook material should be attractive.
5. The materials should be of the informational type.
6. The vocabulary of the directions should be assayed for possible comprehension difficulties.
7. Responses should be characterized by rich and varied association and by inferential type thinking rather than by an aided or unaided recall of sheer facts.²⁰

Wesley²¹ thinks that the workbooks should be regarded as "suggestions" with the bulk of learning activities originating from pupil-teacher contributions. He feels that workbooks will probably continue to be successful until "teachers are prolific in ideas and resourceful in methods."

Van Liew²² reminds us that the prime teaching function--that of guiding pupils in study, in learning, and work--is often buried under heavy curricula demands, crowded schedules

²⁰Ibid., p. 571.

²¹Wesley, Edgar B., "Workbooks in the Social Studies," Historical Outlook, vol. 22, April, 1931, p. 153.

²²Van Liew, C. C., "Can the Workbook Be Justified?," The School Executive, vol. 53, October, 1933, pp. 38-39.

and classrooms and pedagogical sluggishness. Here, he feels, "is the opportunity of the workbook." Workbooks must fulfill three requirements to receive his approval:

1. The specialist's mastery and interpretation of subject matter.
2. The skill and judgment of the experienced pedagogy.
3. The clear definite diction of a writer of good English.²³

Wacek's²⁴ observations have led him to conclude that there are both good and bad workbooks. He classifies the bad ones as being mere "busy-work devices" and the good ones as being of "inestimable value both to teachers and pupils." Wacek feels that workbooks can supplement the class instruction and "clarify dozens of different things which might forever confuse the pupil without their help."

Andreen²⁵ summarizes his opinion of workbooks with the following comment:

Commercial workbooks which generally are organized to furnish enough teaching material for a year or half year are taking place of lesson plans, study guides, etc., in many schools. . . The chief objection to them is that with them available many teachers stop planning and thinking

²³Ibid., pp. 38-39.

²⁴Wacek, Helene, "Workbooks," Nebraska Educational Journal, vol. 24, March, 1944, p. 84.

²⁵Andreen, Earl P., "What Do We Think of Workbooks?," California Journal of Elementary Education, vol. 6, August, 1947, p. 26.

about teaching and hence quit growing. The books are valuable when properly used and help teachers to do systematic teaching while they are organizing materials of their own.²⁶

Melcom²⁷ advocates a personalized workbook which will become a cumulative record of all work and serve on file as a unit plan for future references. He feels that a workbook "only becomes personal when the student has chosen its particular contents."

In rendering his opposition to the use of workbooks, Osburne²⁸ says:

The workbooks show no recognition of individual differences. There is no way for the teacher to know whether the books are to be used for remedial treatment for a slow pupil, or whether they are for use as additional work for bright pupils. Finally, there is no way of relating the workbook to the textbook which happens to be in use. The assignment for today may refer to stocks and bonds, and the pupil may be having trouble. The need of the hour is for further treatment of stocks and bonds. Possibly an adequate treatment of the sort needed may be given somewhere in the workbooks, but goodness only knows where it is.

²⁶Ibid., p. 26.

²⁷Melcom, H. G., "Personalized Workbooks," Sierra Educational News, vol. 36, October, 1940, p. 15.

²⁸Osburne, W. J., "Educational Medicine," Educational Research, vol. 10, January 7, 1931, p. 20.

29
Vreeland feels that:

In the last analysis a workbook can be no more than a means to an end. Its function is to facilitate the teaching and learning processes as they must be carried on in the modern school. It follows that the workbook may be either an utterly valueless instrument or an indispensable tool, depending upon the nicety with which it is adjusted to the instructional situation in which it is used. Final appraisal of the workbook, therefore, ought to be based upon its effectiveness in actual use in the classroom.

The writer has attempted to show the controversy that exists concerning the merits of the workbook. One can readily see in summarizing the literature concerning workbooks that regardless of what may be one's personal opinion, it may be substantiated by the opinion of some one or more writers.

²⁹Vreeland, op. cit., p. 35.

CHAPTER IV

PROCEDURE OF THE STUDY

1. Related literature, consisting of articles, text-books, pamphlets, and research studies relating to the workbook situation was investigated to obtain a background for this study.

2. In order to obtain a complete list of all economic geography workbooks, the following publishing companies were either written to or visited by the writer.

- a. Allyn and Bacon, Boston.
- b. American Book Company, Boston.
- c. Appleton-Century Company, New York.
- d. Charles Scribner's & Sons, Boston.
- e. D. C. Heath & Company, Boston.
- f. Ginn and Company, Boston.
- g. Holt, Henry & Company, New York.
- h. Houghton Mifflin Company, New York.
- i. Lippincott Company, Philadelphia.
- j. MacMillan Company, New York.
- k. McGraw-Hill Company, New York.
- l. McKnight & McKnight, Bloomington.

- m. Prentice-Hall, New York.
- n. Rand McNally Company, Chicago.
- o. Scott, Foresman & Company, New York.
- p. Silver Burdett Company, Boston.
- q. South-Western Company, Cincinnati.
- r. World Book Company, Boston.

3. City and state courses of study were consulted to determine the most widely used economic geography workbooks in the high school. Using this procedure, the following eight workbooks were selected for this study:

- a. Colby, Charles C., and Foster, Alice,
Investigations in Industries and Resources,
Ginn and Company, Boston, 1941.
- b. Durand, Loyal, and Whitaker, Joe Russell,
Workbook for the Working World, American
Book Company, Boston, 1938.
- c. Gibson, J. Sullivan, and Ridgley, Douglas C.,
Studies in Economic Geography, McKnight and
McKnight, Publishers, Bloomington, 1935.
- d. Martin, Maude C., Activities Notebook,
D. C. Heath and Company, Boston, 1940.
- e. Miller, Lloyd A., and Hall, Agnes, Global
Geography for High Schools, Allyn and Bacon,
Boston, 1948.

- f. Overton, Bruce, Work-Test Book, The MacMillan Company, New York, 1934.
- g. Ridgley, Douglas C., and Ekblaw, Sydney, E., Problems in Economic Geography, McGraw-Hill Company, New York, 1938.
- h. Staples, Z. Carleton, and York, G. Morell, Workbook for Use with Economic Geography, South-Western Publishing Company, New York, 1940.

4. A preliminary analysis of the foregoing workbooks was conducted to determine the most efficient, objective manner by which the following information could be obtained:

- a. Contribution of the specific data for the evaluation of the content of workbooks in economic geography.
- b. Determination of the extent workbooks aid pupils to study more economically and effectively.
- c. Comparisons of the kinds of activities found in these workbooks.
- d. Determination of the number and types of teaching aids which these workbooks provide such as graphs, illustrations, and photographs.

e. Provision of data in graphic form which will enable teachers to easily interpret the physical construction of workbooks in economic geography.

5. After the preliminary analysis of the workbooks in this study, 19 component elements of the activities in the workbooks were defined as the basis for this study. (See Pages 3, 4, 5, and 6.)

6. Each workbook was analyzed individually and tabulations of the activities were made.

7. The data obtained were set up into tables and graphs, and analyzed.

8. A summary and conclusions were formulated based upon the findings.

CHAPTER V

RESULTS OF THE SURVEY

The data used in this study are based upon the results of a survey of the activities provided for high school students in eight workbooks in economic geography.

The following 16 pages are devoted to presentation of descriptive pictures of each workbook that was analyzed in this study. The tables accompanying the workbook descriptions show the frequency distribution of each component element found within each of the eight workbooks that were analyzed.

Workbook #1 -- Investigations in Industries and Resources, by Charles C. Colby and Alice Foster, is a specific workbook based on the textbook Economic Geography, written by the same authors. This workbook is composed of 11 units which are arranged to correlate with chapters in the textbook. Each unit is introduced with the objectives and reasons for studying that particular unit. Summary exercises are presented in the form of study or completion questions. This is the only workbook in the study that contains multiple-response items, and one of two that has diagrams and diagram exercises. Of the 19 component elements in this study, all but three are represented in this workbook.

From Table 1, we see that completion items represent 45 per cent of the total while the multiple-choice items are second highest in frequency with a total of 36 per cent; that the next two items in order of frequency are matching and map exercises; that although listing exercises are common in most economic geography workbooks, they are not found in this workbook; that chart exercises are considered essential elements by the authors of this workbook.

TABLE 1
NUMBER OF UNITS SCORED FOR EACH
COMPONENT ELEMENT IN
INVESTIGATIONS IN INDUSTRIES AND RESOURCES

Component Elements	Number of Units Scored
General Activities	8
Outline Development.	3
Picture Studies.	<u>5</u>
Charts	23
Chart Exercises.	25
Class Reports.	5
Completion	692
Diagrams	17
Diagram Exercises.	14
Graphs	39
Graph Exercises.	38
Map Outlines	77
Map Exercises.	56
Matching	58
Multiple Choice.	21
Multiple Response.	559
Photographs.	4
Study.	56

Workbook #2 -- Workbook for the Working World, by Loyal Durand and Joe Russell Whitaker is a specific type of Workbook primarily prepared to accompany the textbook, The Working World, tri-authored by Durand, Whitaker, and John Whitbeck. This workbook is composed of ten units which are divided into the chapter headings of the textbook. Each unit is introduced by presentation of general objectives, telling the students why they are about to undertake a certain study. The authors do not present summaries but ask the student to construct individual summaries or conclusions. A large amount of space is allotted for student response and pages are perforated for easy removal.

Table 2 shows that of the 11 elements represented, 67 per cent consist of study questions, 11 per cent of completion items, and nine per cent of listing exercises; that matching, multiple choice, and true-false items are not represented; that only a small number of visual aids are presented; that only two charts are found.

TABLE II
NUMBER OF UNITS SCORED FOR EACH
COMPONENT ELEMENT IN
WORKBOOK FOR THE WORKING WORLD

Component Elements	Number of Units Scored
General Activities	12
Debate	1
Freehand Drawing	1
Outline Development.	1
Outside Reading.	1
Picture Studies.	<u>8</u>
Charts	2
Chart Exercises.	12
Class Reports.	10
Completion	111
Definitions.	59
Graph Exercises.	9
Listing.	98
Map Outlines	16
Map Exercises.	28
Study.	687

Workbook #3 -- Studies in Economic Geography, by J. Sullivan Gibson and Douglas C. Ridgley, is not written to accompany any particular text but is arranged so that it may serve as a guide for use with any of the leading economic geography textbooks on a high school level. This workbook is divided into sixteen units which are further sub-divided into topics. Each unit presents references to high school textbooks, objectives for the study unit, and one outline map which provides the basis for the introductory activities. The authors often terminate a unit with a summarization intended to clarify and correlate objectives.

From table 3 we see that ten of the 19 elements are represented in this workbook; that study questions constitute 38 per cent of the total activities followed by completion items, 22 per cent, and listing exercises, 17 per cent; that over 200 visual aids are provided; that all activities may be considered as standard in that no general activities are found in this workbook.

TABLE III	
NUMBER OF UNITS SCORED FOR EACH	
COMPONENT ELEMENT IN	
<u>STUDIES IN ECONOMIC GEOGRAPHY</u>	
Component Elements	Number of Units Scored
Charts	3
Chart Exercises.	8
Completion	170
Definitions.	3
Graphs	122
Graph Exercises.	124
Listing.	135
Map Outlines	80
Map Exercises.	74
Study.	295

Workbook #4 -- Activities Notebook, by Maude C. Martin, is a specific workbook prepared to guide the student in organizing and acquiring the important facts in the textbook The United States at Work, written by Martin in collaboration with Clyde E. Cooper. This workbook is divided into six units, each unit being composed of two or three problems. Each problem develops from an introductory statement which serves as a study guide. Space is provided for everything except the drawings, the graphs, and the outlines for oral reports. About one sixth of the guide consists of space allotted to written work, and in many cases the student is asked to check his answer rather than write it out. The author feels that the objectives should all be geared to interest in present-day problems.

Table 4 shows that the chief emphasis in this guide has been placed on study questions; that listing and completion items are second and third in frequency occurrence; that charts, diagrams, and graphs are not found in this workbook; that true-false items are represented in a small amount.

TABLE IV
NUMBER OF UNITS SCORED FOR EACH
COMPONENT ELEMENT IN
ACTIVITIES NOTEBOOK

Component Elements	Number of Units Scored
General Activities	46
Advertisement Writing	1
Current Events Collections.	2
Check List Completion	10
Exercise Construction	2
Freehand Drawing	8
Library Research.	9
Map Construction.	6
Picture Collection.	7
Recording Day's Weather	<u>1</u>
Chart Exercises.	6
Class Reports.	23
Completion	166
Definitions.	19
Graph Exercises.	9
Listing.	200
Map Outlines	23
Map Exercises.	44
Matching	19
Multiple Choice.	37
Study.	602
True-False	4

2 3 4 5 6 7 8 9

• • •

4 4 1 1

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4

4 1 9 8 7 6 5 4 3 2 1

Workbook 15 -- Geography Workbook by Lloyd Miller and Agnes Hall is intended for use with Van Cleff's Global Geography for High Schools. Presenting 17 units which are sub-divided into topics to coincide with textbook chapter headings, the authors introduce each unit with a general activity devised to arouse student interest. Terminating activities in each unit consist of applied geography questions - generally of a mathematical nature. Of the 19 component elements defined in this study, Geography Workbook utilizes nine.

Table 5 shows that 83 per cent of the total activities in this workbook are study questions; that the number and variety of general activities exceed those of any other workbook in this study; that pupils are required to develop many individual graphs; that map activities are second in frequency of occurrence; that common questioning items are not represented.

TABLE V
NUMBER OF UNITS SCORED FOR EACH
COMPONENT ELEMENT IN
GLOBAL GEOGRAPHY FOR HIGH SCHOOLS

Component Elements	Number of Units Scored
General Activities	30
Debates	1
Exhibits.	10
Experiments	1
Field Trips	3
Freehand Drawing.	1
Map Construction.	1
Mathematical Problems	4
Model Construction.	2
Picture Collection.	3
Planning Trips.	1
Planting Seeds.	1
Poster Construction	1
Sample Collection	1
Class Reports.	38
Graphs	4
Graph Exercises.	49
Listing.	12
Map Outlines	25
Map Exercises.	56
Photographs.	18
Study.	917

Workbook #6 -- York-Test Book, by Bruce Overton, has been written to accompany The Nations at York by the same author. This workbook is composed of 42 problems, none of which have introductory or terminating activities. The exercises are arranged in such a way that no additional paper is needed in following out the assignments. About two thirds of the workbook's space is allotted to written work. There are numerous opportunities to measure the knowledge of the pupil for many answering techniques are employed. The greatest number of completion items found in this workbook survey appear in York-Test Book.

Table 6 shows that there are over twice as many completion items as there are opportunities for listing; that although there are 533 study questions this device ranks third in frequency; that a small number and variety of visual aids are presented; that the general activities consist almost wholly of student creativeness; that the total of map and graph exercises are less numerous than class reports.

TABLE VI
NUMBER OF UNITS SCORED FOR EACH
COMPONENT ELEMENT IN
WORK-TEST BOOK

Component Elements	Number of Units Scored
General Activities	5
Construct Map	1
Freehand Drawing	1
Mathematical Problems	1
Menu Development	1
Outline Development	<u>1</u>
Charts	3
Chart Exercises	10
Class Reports	30
Completion	1362
Definitions	141
Graphs	7
Graph Exercises	19
Listing	575
Map Outlines	4
Map Exercises	7
Matching	22
Multiple Choice	104
Study	538
True-False	<u>46</u>

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	12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Workbook #7 -- Douglas Fiedler's and Sydney Pollack's Problems in Economic Geography is a specific type of workbook intended primarily for use with Influence of Geography on Our Economic Life by the same authors. The workbook is composed so that it may also be used as a study guide with any similar textbook in economic geography. Consisting of 42 lessons sub-divided into daily units, maps and graphs form the integral basis of this workbook. The authors introduce each lesson with a paragraph summarizing the field of study, attempting to gain student interest. Class reports and optional activities provide the terminating exercises. About one-third of the workbook is allotted to space for student response.

Table 7 shows that 15 of the 19 component elements are represented in this workbook; that completion items are almost five times greater than study questions; that a large number of visual aids are found; that many class reports are presented for student development; that map and graph exercises occur in abundance.

TABLE VII
NUMBER OF UNITS SCORED FOR EACH
COMPONENT ELEMENT IN
PROBLEMS IN ECONOMIC GEOGRAPHY

Component Elements	Number of Units Scored
General Activities	26
Article Collections	1
Exhibit Planning.	2
Field Trips	3
Map Construction.	1
Mathematical Problems	1
Measuring Sun Shadows	1
Outline Construction.	6
Picture Collection.	1
Planning Trips.	2
Product Collection.	<u>8</u>
Charts	6
Chart Activities	54
Class Reports.	50
Completion Items	909
Definitions.	89
Diagrams	35
Diagram Exercises.	17
Graphs	74
Graph Exercises.	10
Listing.	103
Map Outlines	91
Map Exercises.	76
Matching Items	90
Study Question Items	205

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations (1) and (2) for arbitrary values of the parameters α and β . It is shown that the system has a solution for all values of the parameters α and β if and only if the condition $\alpha + \beta > 0$ is satisfied.

2. In the second part of the paper the problem of the existence of a solution of the system of equations (1) and (2) for arbitrary values of the parameters α and β is solved. It is shown that the system has a solution for all values of the parameters α and β if and only if the condition $\alpha + \beta > 0$ is satisfied.

Workbook #3 -- Workbook for Use with Economic Geography by Z. Carleton Staples and G. Harrell York is intended for use with Economic Geography, a textbook written by the authors of the workbook. Twenty-five units are presented in correlation with textbook chapter organization. There are no introductory or culminating activities. Pages are perforated for easy removal and approximately one tenth of the workbook space is allotted to student response.

Table 3 shows completion items and over five times more prominent than multiple-choice items which rank second in frequency occurrence; that eight of the 19 component elements are not represented in this workbook; that only 43 out of 100 questions were found in this workbook; that only three general activities are found; that map exercises occur two and one-half times more than graph exercises.

TABLE VIII
 NUMBER OF UNITS SCORED FOR EACH
 COMPONENT ELEMENT IN
WORKBOOK FOR USE WITH ECONOMIC GEOGRAPHY

Component Elements	Number of Units Scored
General Activities	3
Freehand Drawing.	3
Charts	8
Chart Exercises.	2
Completion	1168
Graphs	20
Graph Exercises.	20
Map Outlines	50
Map Exercises.	50
Matching	30
Multiple Choice.	226
Study.	42

Figure 1 and Table 9 present a cumulative summary of the number of units scored for each component element found within the eight workbooks. Table 9 shows that an average of the total activities are devoted to cumulative items, slightly more than one fourth of the total activities are devoted to study questions, listing exercises constitute approximately one tenth of the total, and the remaining 16 component elements comprise approximately one quarter of the total activities scored. There are 391 map exercises, 278 graph exercises, and 117 chart exercises.

Figure 2 shows that all of the workbooks, with the exception of III, offer general activities. Workbooks IV, V, and VII present the greatest number of opportunities in this area. The number of general activities has a range of zero to 46, and the average number per workbook is 16.

Figure 3 shows that six of the eight workbooks contain charts that range in number from two to 23. Workbook I has 23 charts while Workbook II has two charts.

Figure 4 records the number of chart exercises and reveals that all but Workbook V offer this type of exercise. The average number of chart exercises per workbook is 11, and the range extends from zero to 54.

Figure 5 reveals that six of the eight workbooks analyzed provide topics for class reports. Workbooks III and VIII do not offer opportunities for this type of exercise.

TABLE 9

COMPARATIVE TABLE OF THE
COMPONENT ELEMENTS IN
EIGHT WORKBOOKS

(COMPONENT ELEMENTS)	(WORKBOOKS)								TOTALS
	I	II	III	IV	V	VI	VII	VIII	
GENERAL ACTIVITIES	8	12	-	46	30	5	26	3	130
CHARTS	23	2	3	-	-	3	6	8	45
CHART EXERCISES	25	12	8	6	-	10	54	2	117
CLASS REPORTS	5	10	-	23	38	30	50	-	156
COMPLETION ITEMS	692	111	170	166	-	1362	909	1168	4578
DEFINITIONS	-	59	3	19	-	141	89	-	311
DIAGRAMS	17	-	-	-	-	-	35	-	52
DIAGRAM EXERCISES	14	-	-	-	-	-	17	-	31
GRAPHS	39	-	122	-	4	7	74	20	266
GRAPH EXERCISES	38	9	124	9	49	19	10	20	278
LISTING	-	98	135	200	12	575	103	-	1123
MAP OUTLINES	77	16	80	23	25	4	91	50	366
MAP EXERCISES	56	28	74	44	56	7	76	50	391
MATCHING ITEMS	58	-	-	19	-	22	90	80	269
MULTIPLE-CHOICE ITEMS	21	-	-	37	-	104	-	226	388
MULTIPLE-RESPONSE	559	-	-	-	-	-	-	-	559
PHOTOGRAPHS	4	-	-	-	18	-	-	-	22
STUDY QUESTIONS	56	687	295	602	917	538	205	42	3342
TRUE-FALSE ITEMS	-	-	-	4	-	46	-	-	50

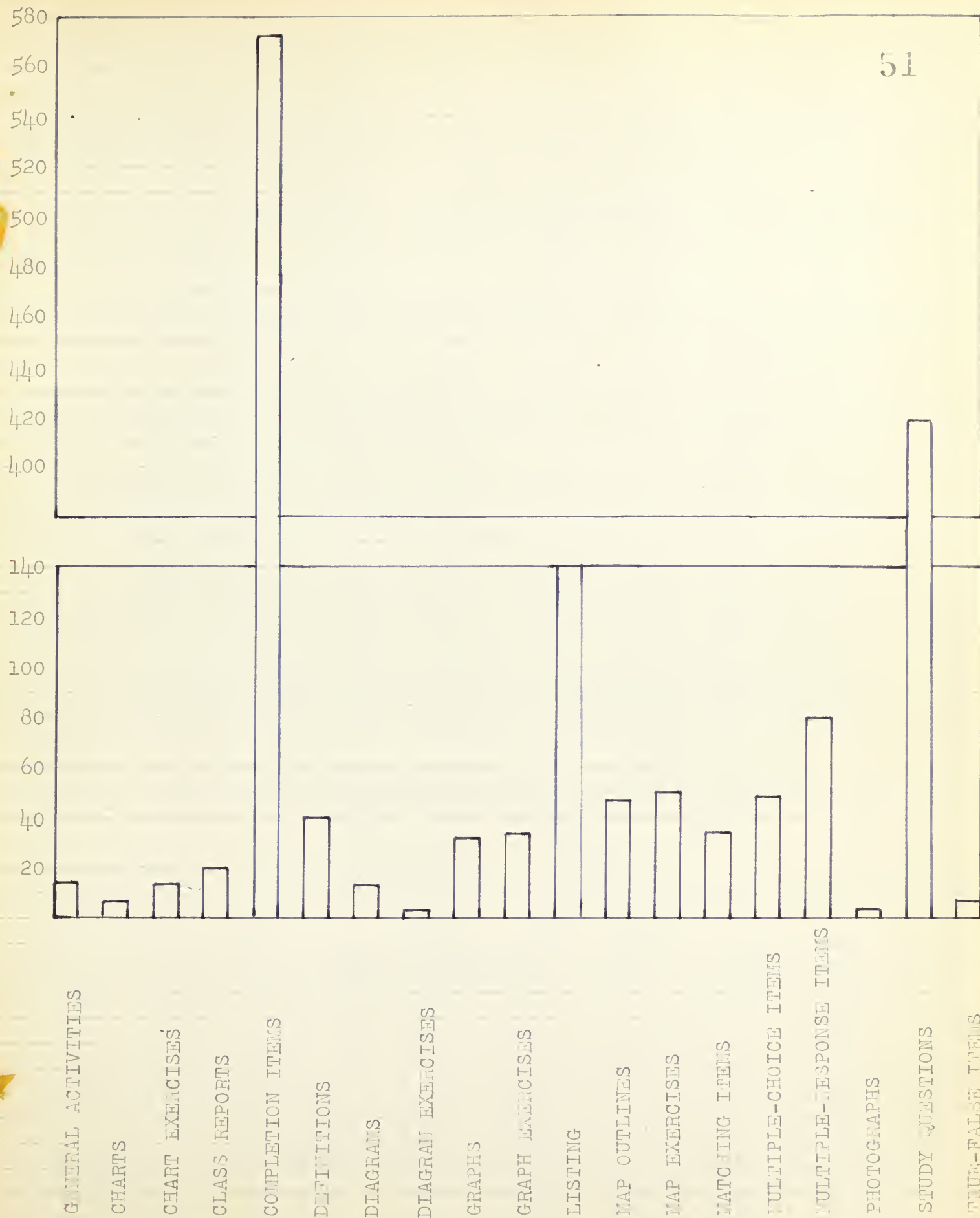


FIGURE 1

CUMULATIVE CHART OF EIGHT WORKBOOKS

Range 0 - 46

Average 16

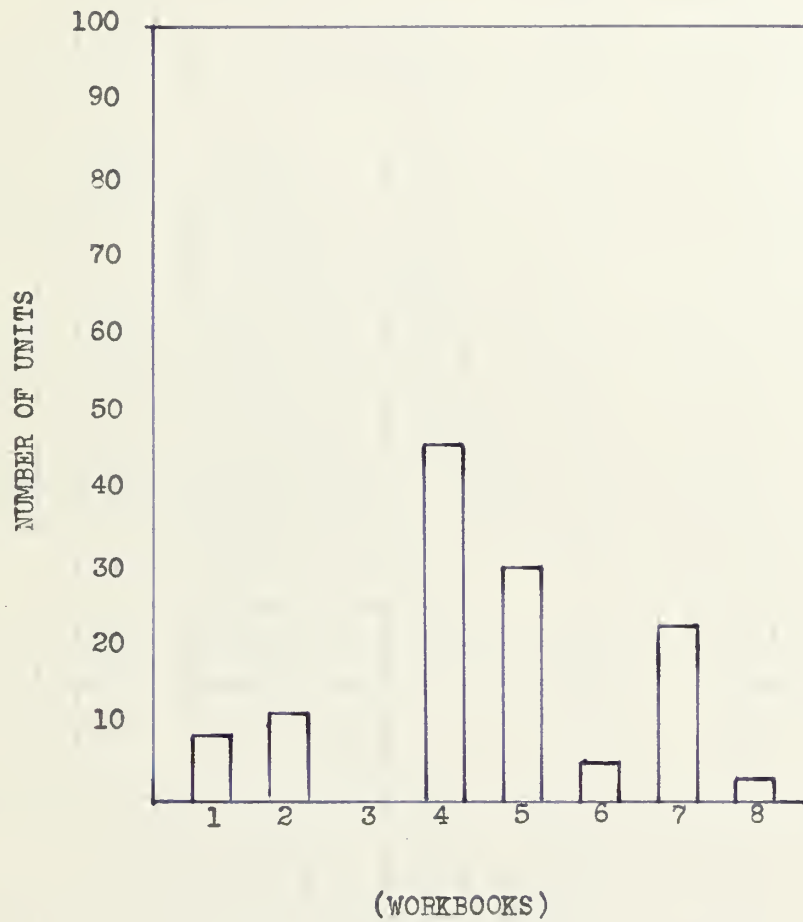


FIGURE 2

NUMBER OF ACTIVITIES
SCORED IN EIGHT WORKBOOKS

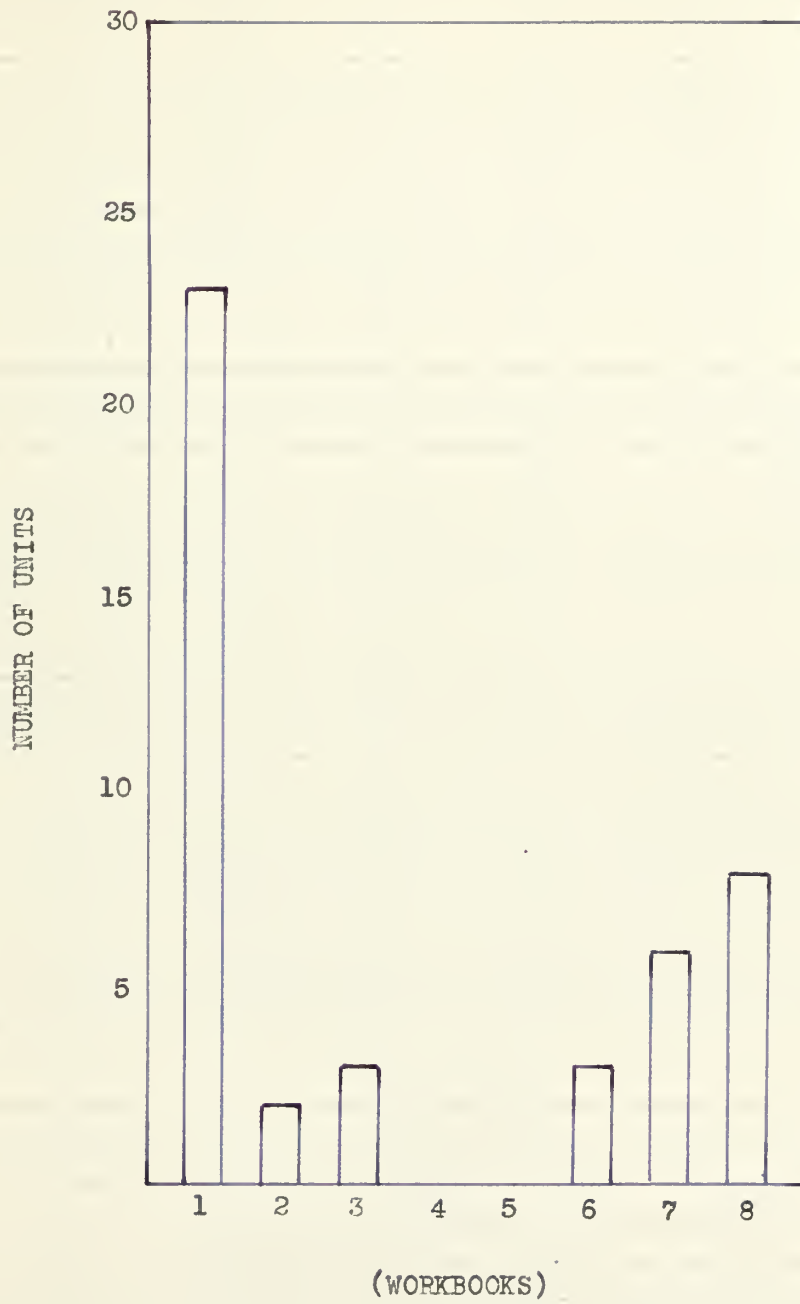


FIGURE 3

NUMBER OF CHARTS

SCORED IN EIGHT WORKBOOKS

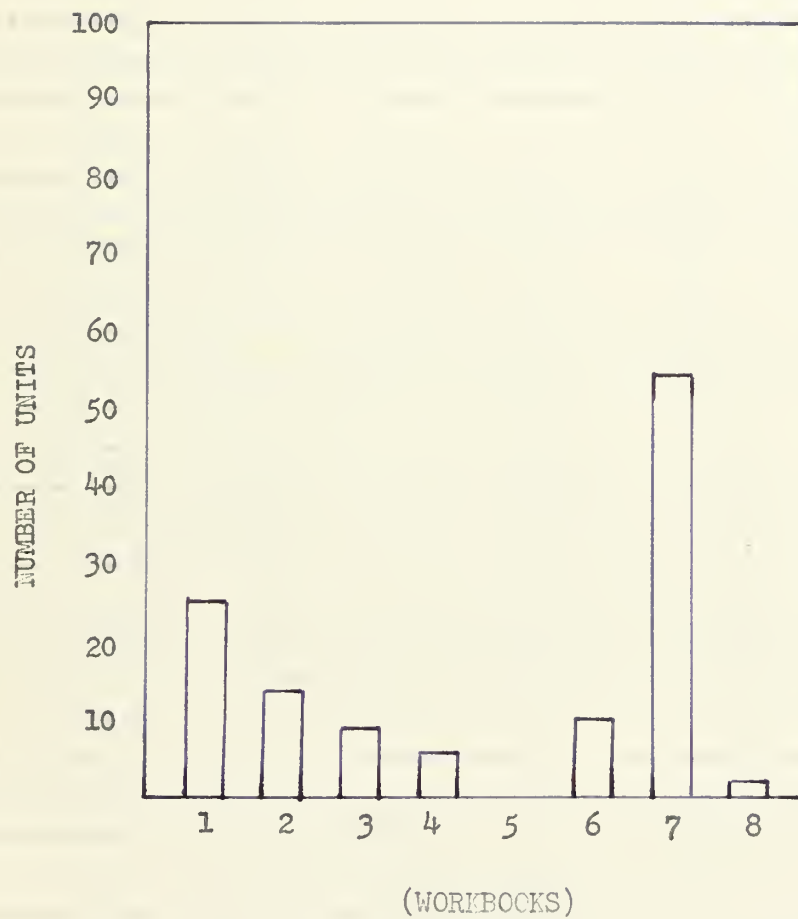


FIGURE 4

NUMBER OF CHART EXERCISES
SCORED IN EIGHT WORKBOOKS

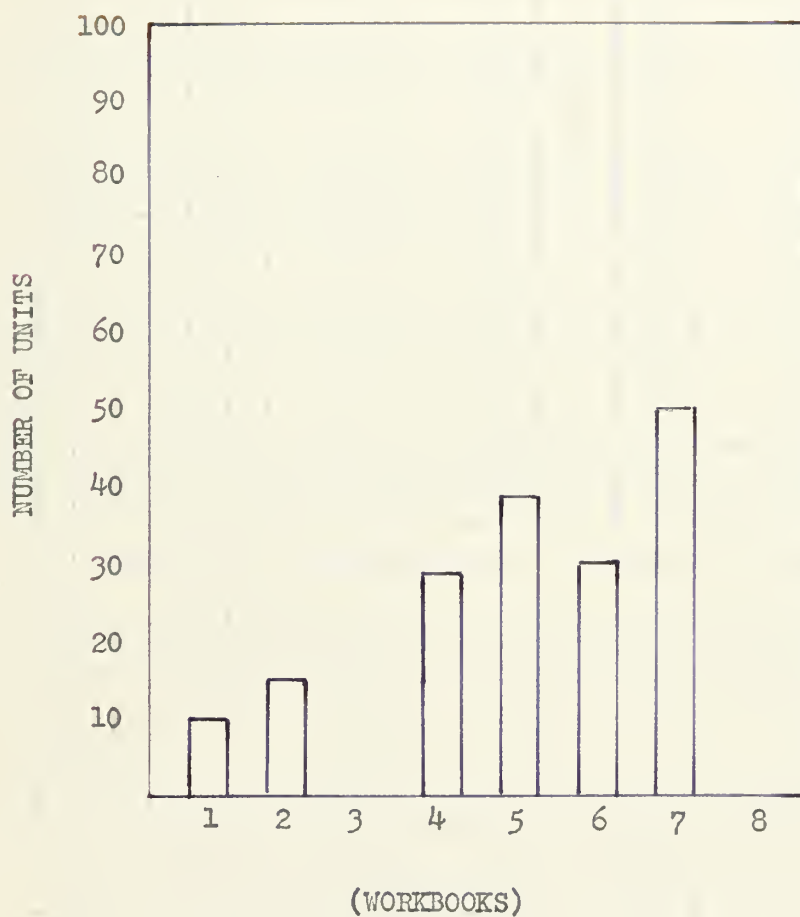


FIGURE 5
NUMBER OF CLASS REPORTS
SCORED IN EIGHT WORKBOOKS

Figure 6 reveals that completion items appeared 4578 times in seven of the eight workbooks analyzed. Workbook V did not make use of this type of item. Completion items were found to be the most frequent device employed in this study, and the average number of items per workbook analyzed is 572.

Figure 7 reveals that 311 definitions were called for in five workbooks for an average of 40 per workbook analyzed. Workbooks I, V, and VIII do not make use of this type of questioning.

Figure 8 records the small number of diagrams that appeared in this survey. Workbooks I and VII were the only sources of this type of visual aid. Diagrams appeared 17 times in Workbook I and 35 times in Workbook VII.

Figure 9 shows that Workbooks I and VII have 14 and 17 diagram exercises respectfully.

Graphs were found in six of the eight workbooks analyzed as indicated by Figure 10. Graphs appeared 266 times for an average of 33 per workbook. The range was from zero to 122. Workbooks II and IV did not contain graphs.

Figure 11 reveals that every workbook analyzed in this study contained graph exercises which ranged from a low of nine to 124. Workbook III contains 124 graph exercises, and the average is 35 per workbook analyzed.

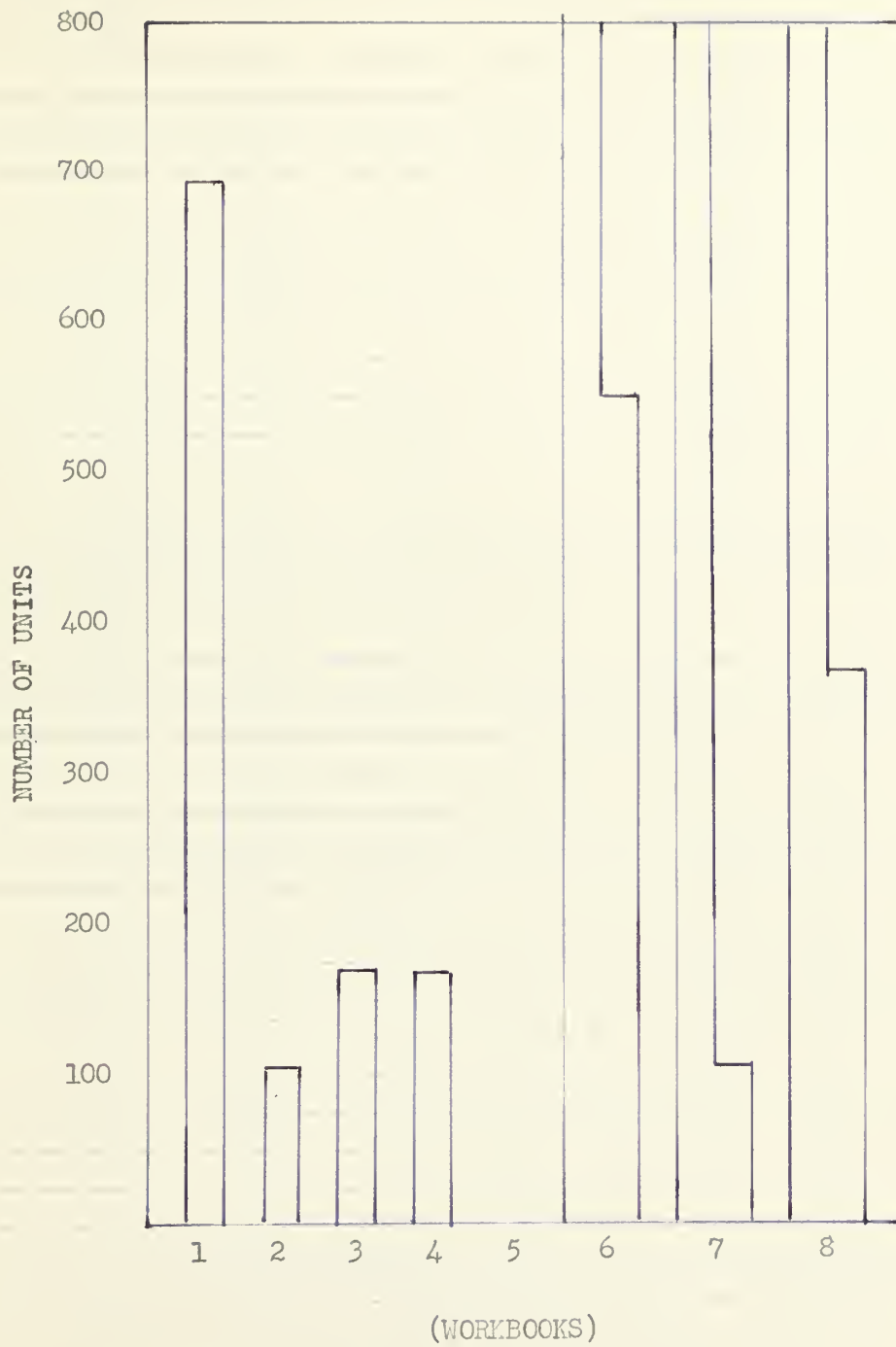


FIGURE 6

NUMBER OF COMPLETION ITEMS

SCORED IN EIGHT WORKBOOKS

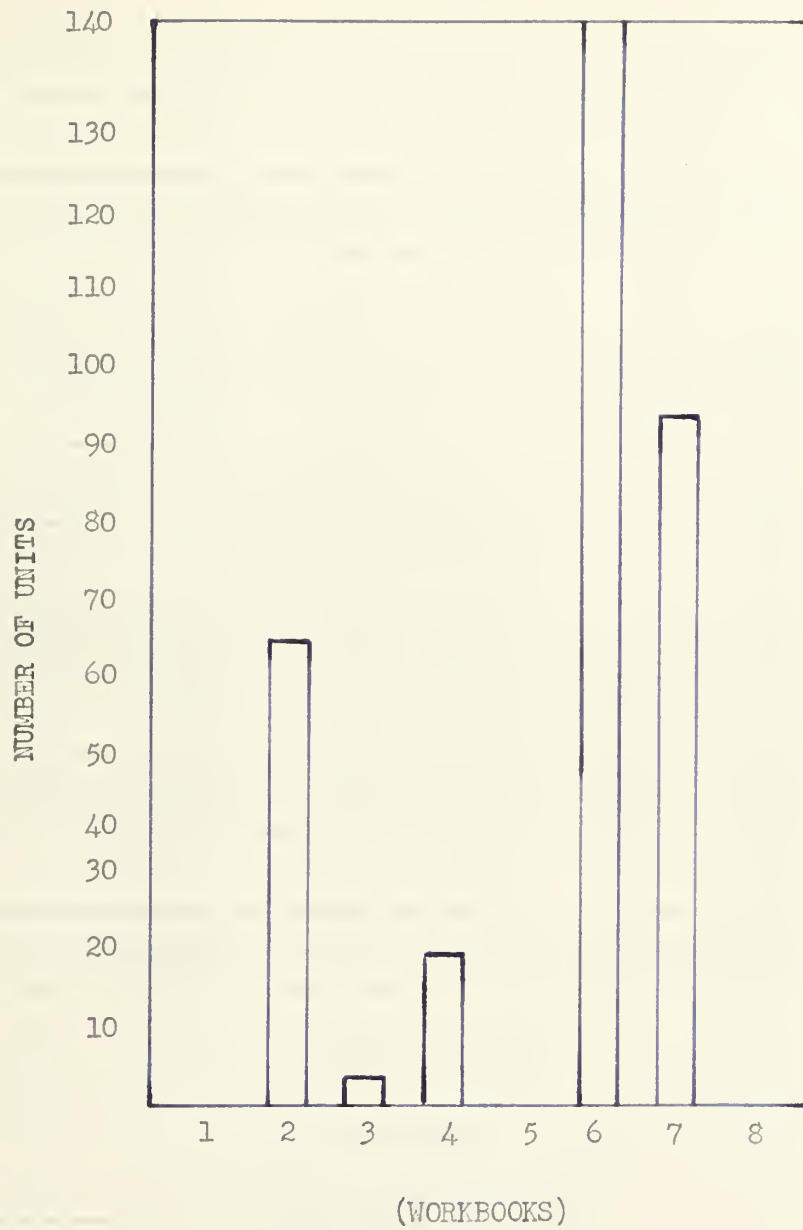


FIGURE 7

NUMBER OF DEFINITIONS CALLED FOR
SCORED IN EIGHT WORKBOOKS

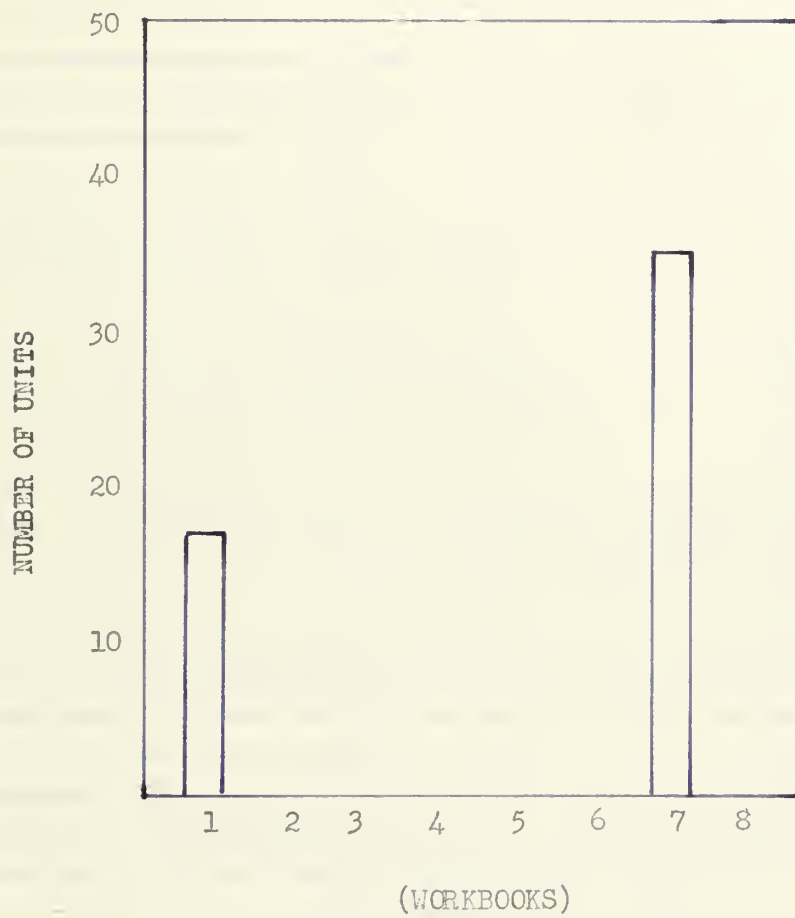


FIGURE 8

NUMBER OF DIAGRAMS
SCORED IN EIGHT WORKBOOKS

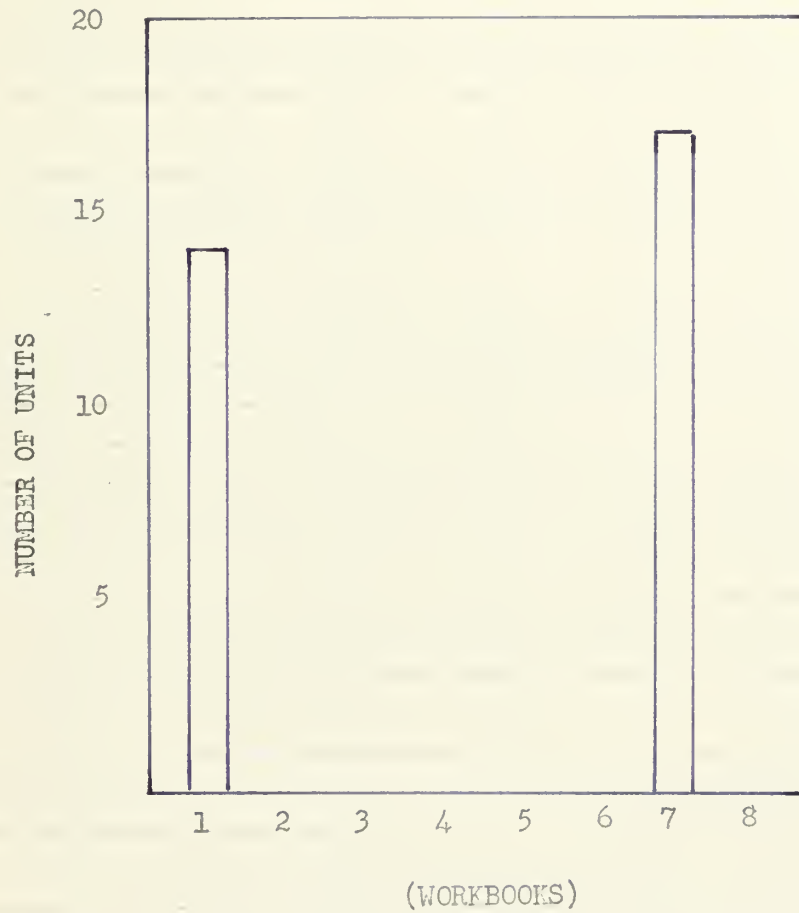


FIGURE 9

NUMBER OF DIAGRAM EXERCISES

SCORED IN EIGHT WORKBOOKS



FIGURE 10

NUMBER OF GRAPHS

SCORED IN EIGHT WORKBOOKS

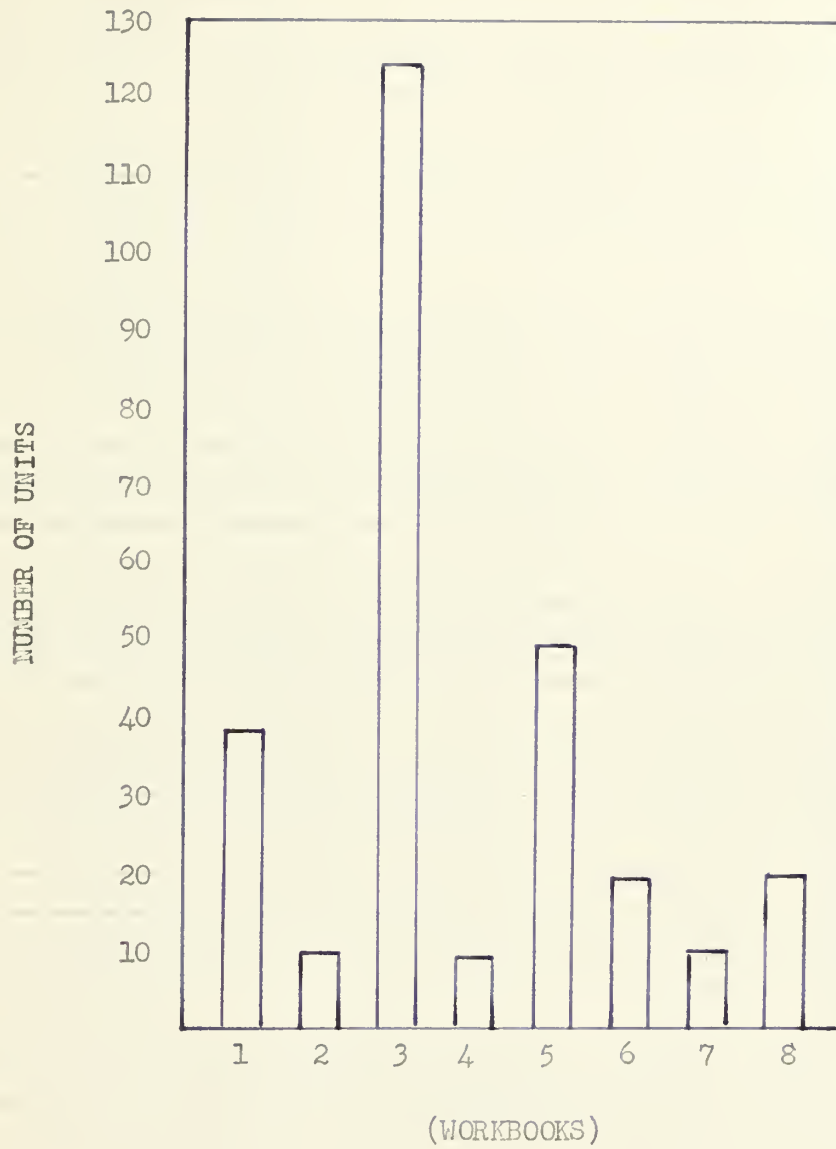


FIGURE 11

NUMBER OF GRAPH EXERCISES
SCORED IN EIGHT WORKBOOKS

Listing exercises appeared 1123 times for an average of 140 exercises per workbook analyzed. Figure 12 shows that workbooks I and VIII were the only workbooks in this survey that did not make use of this type of exercise. The range is from 12 to 575 in the six workbooks that contained listing exercises. The average is 140 exercises per workbook analyzed.

Figure 13 reveals that 366 map outlines appeared in the eight workbooks analyzed. The range is from four, in workbook VI, to 91, in workbook VII. An average of 46 per workbook was found.

Figure 14 shows that all of the workbooks analyzed contained map exercises with an average of 50 per workbook. The range extends from seven to 76, with workbook VII containing the greatest number.

Matching items are represented in all but three of the eight workbooks analyzed as seen by Figure 15. Workbooks II, III, and V do not make use of this type of item. Matching items appear 269 times for an average of 34 per workbook analyzed.

Figure 16 records the number of multiple-choice items found in this survey. Four of the workbooks, I, IV, VI, and VIII, contain multiple-choice items.

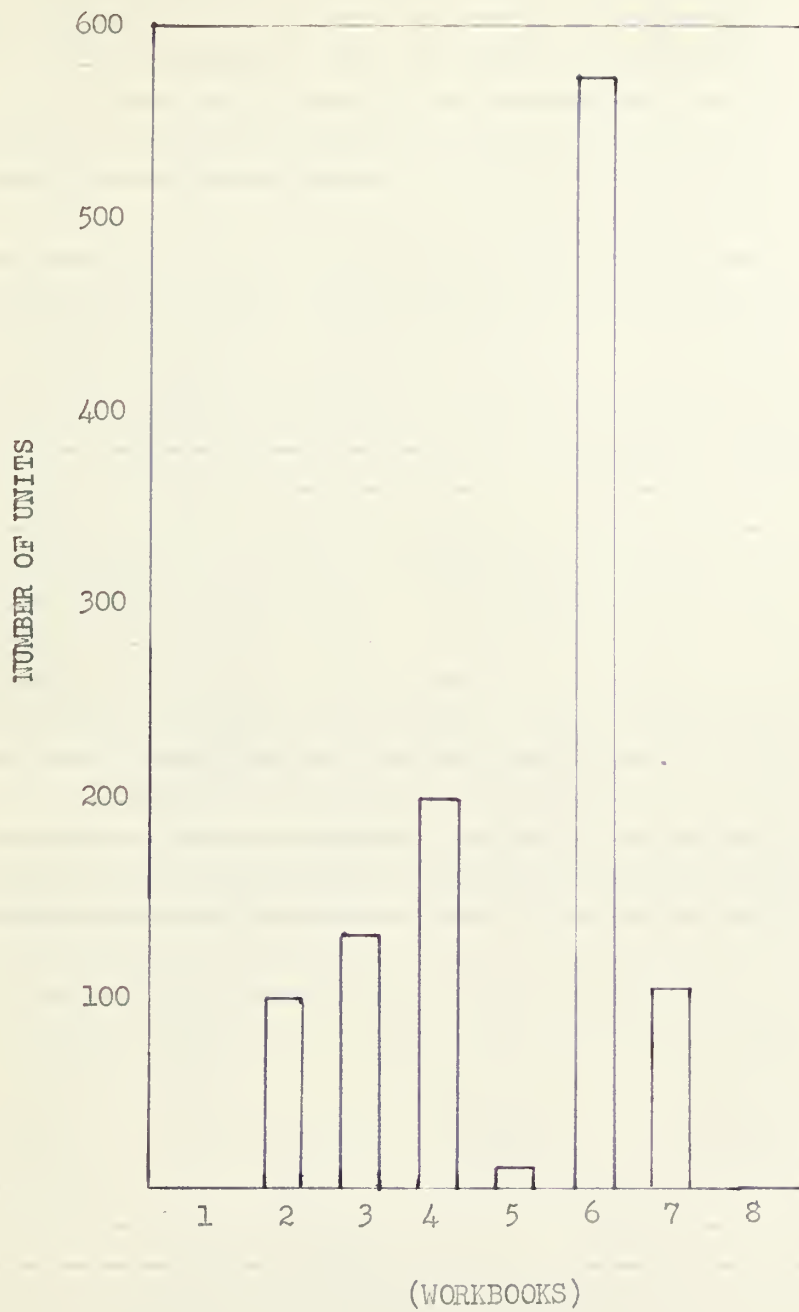


FIGURE 12

NUMBER OF LISTING EXERCISES
SCORED IN EIGHT WORKBOOKS

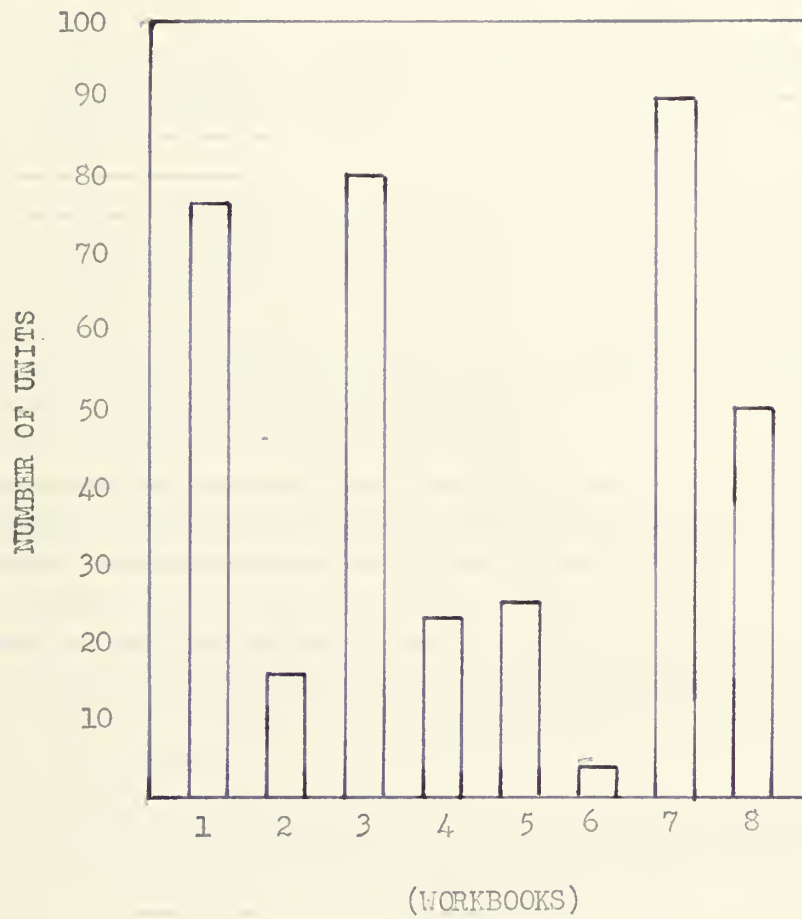


FIGURE 13

NUMBER OF MAP OUTLINES

SCORED IN EIGHT WORKBOOKS

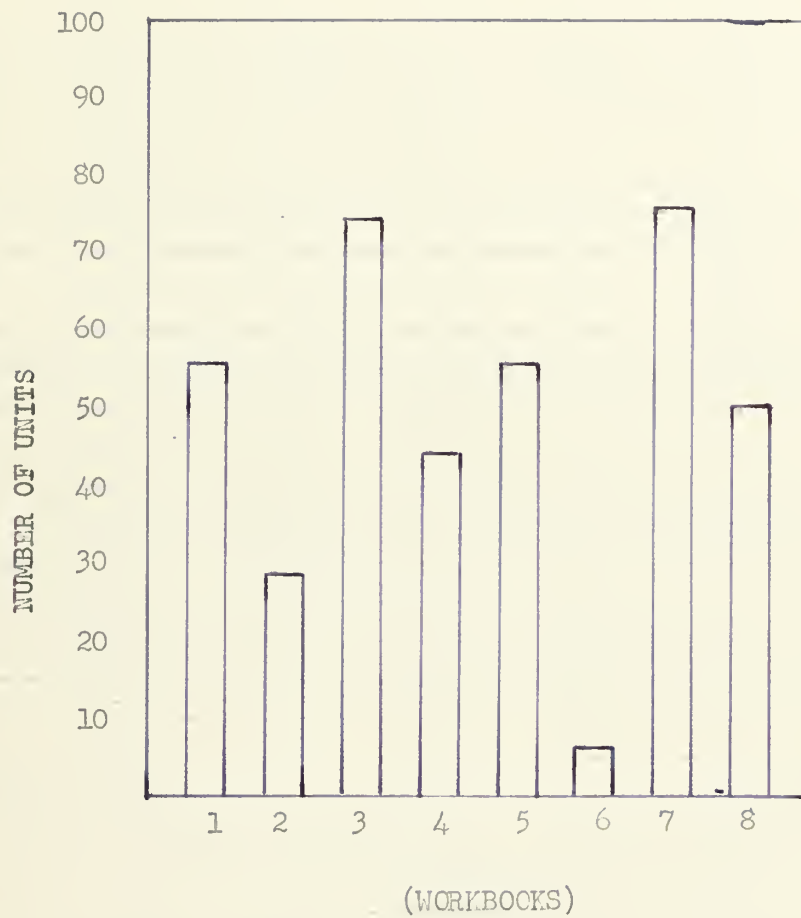


FIGURE 14

NUMBER OF MAP EXERCISES

SCORED IN EIGHT WORKBOOKS

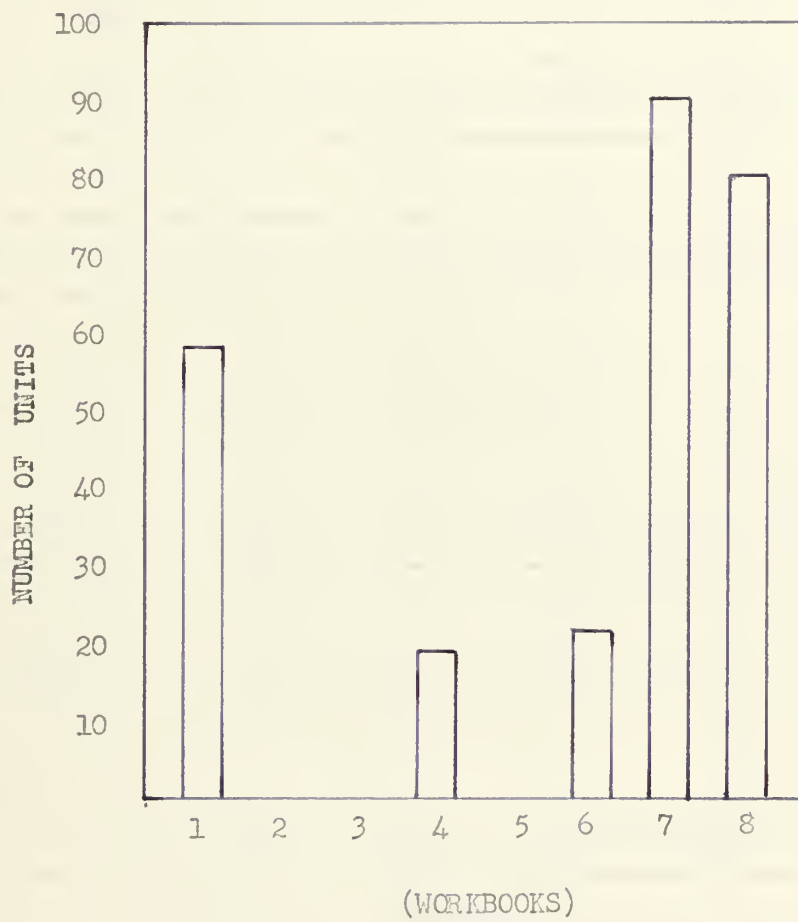


FIGURE 15
NUMBER OF MATCHING ITEMS
SCORED IN EIGHT WORKBOOKS

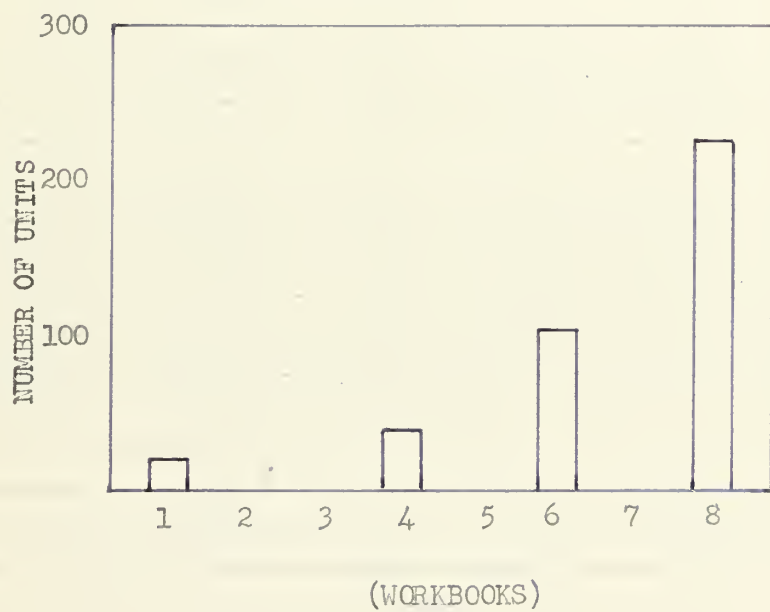


FIGURE 16

NUMBER OF MULTIPLE CHOICE ITEMS

SCORED IN EIGHT WORKBOOKS



Figure 17 reveals that multiple-response items appear in only one workbook.

Figure 18 shows that photographs appear four times in workbook I and 10 times in workbook V. These were the only two workbooks that contained photographs.

Study questions are part of all the workbooks as seen in Figure 19. This type of question is surpassed in frequency only by completion items. Study questions appeared 3042 times for an average of 418 per workbook analyzed. Workbook V contained 917 study questions while workbook VIII contained 40.

Figure 20 shows that the use of true-false items is made in workbooks IV and VI for a total of 50. The remaining six workbooks did not make use of this type of exercise.

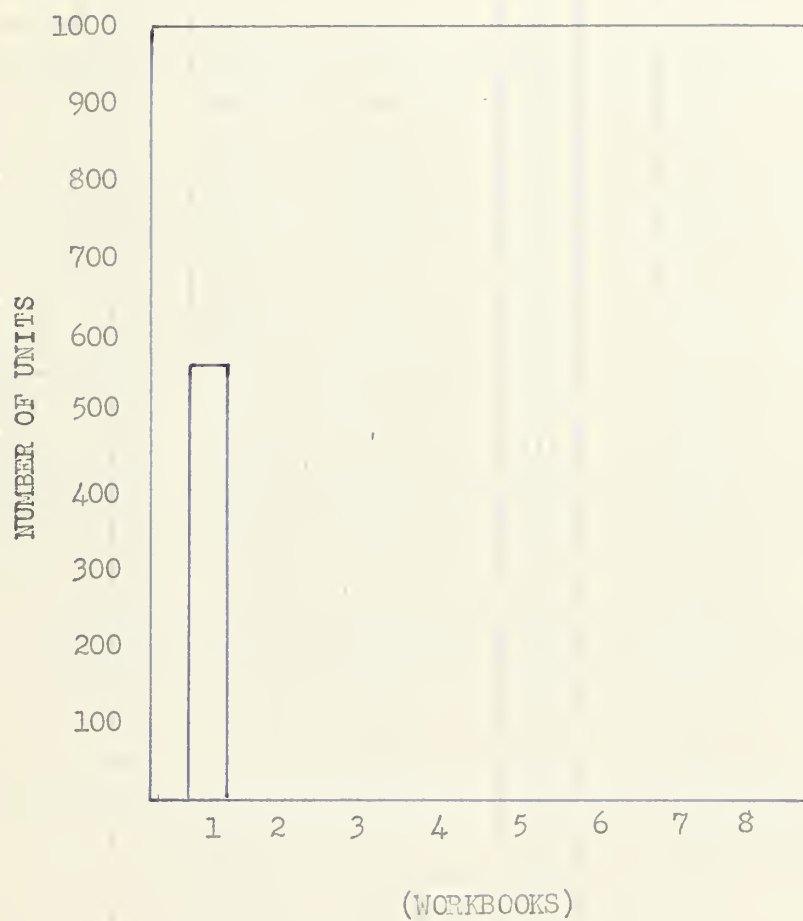


FIGURE 17

NUMBER OF MULTIPLE RESPONSE ITEMS

SCORED IN EIGHT WORKBOOKS

Range 0 - 18
Average 3

71



FIGURE 18

NUMBER OF PHOTOGRAPHS
SCORED IN EIGHT WORKBOOKS

Range 42 - 917
Average 418

72

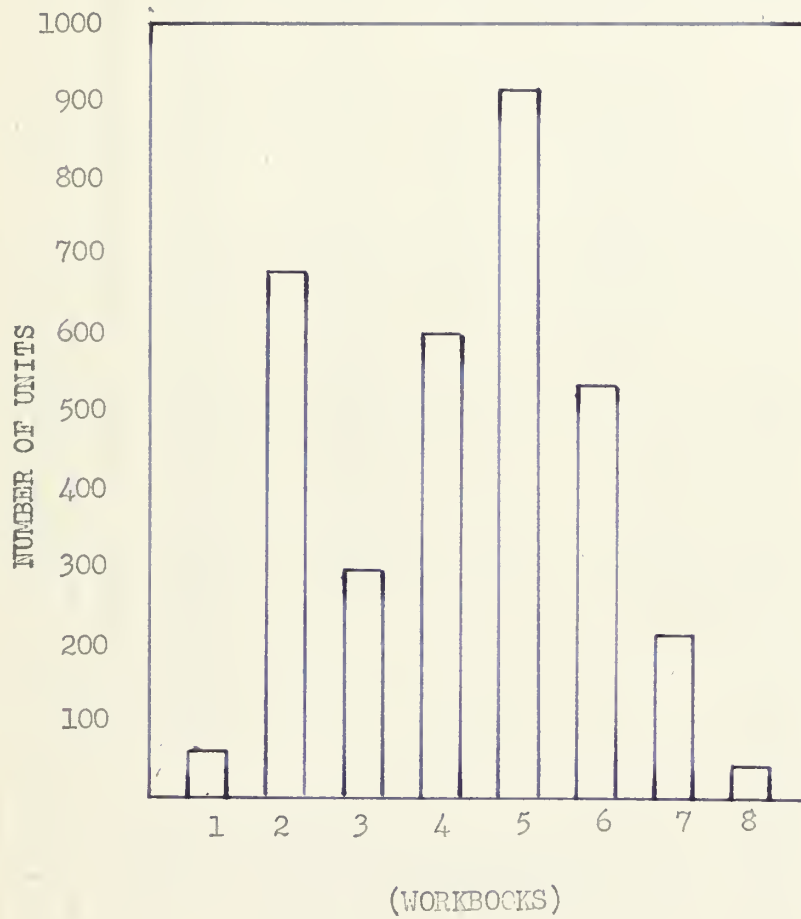


FIGURE 19
NUMBER OF STUDY QUESTIONS
SCORED IN EIGHT WORKBOOKS

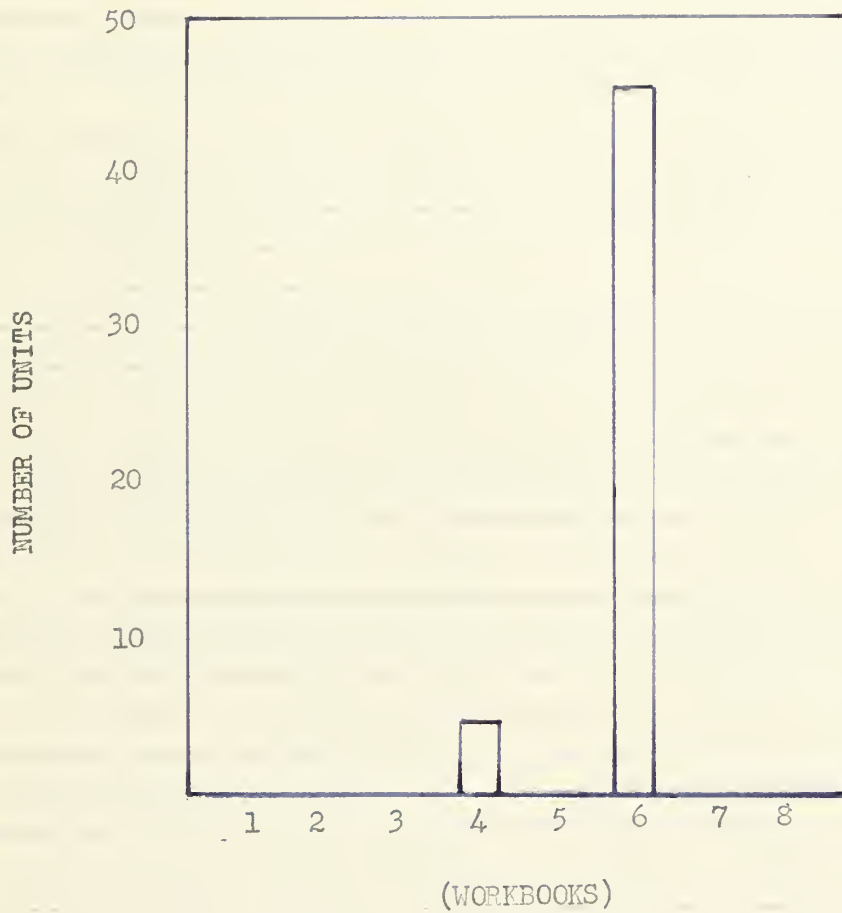


FIGURE 20

NUMBER OF TRUE-FALSE ITEMS
SCORED IN EIGHT WORKBOOKS

CHAPTER VI

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to make a survey of the activities provided for high school students in eight workbooks in economic geography.

Five objectives were formulated to serve as guides in conducting the study:

1. To contribute specific data for evaluating the content of workbooks in economic geography.
2. To determine to what extent workbooks can aid pupils to study more economically and effectively.
3. To make a comparison of the kinds of activities found in these workbooks.
4. To determine the number and types of teaching aids which these workbooks provide, such as maps, graphs, and illustrations.
5. To provide data in graphic form which will enable teachers to interpret easily the physical construction of workbooks in economic geography.

Based upon the objectives of the study, 19 component elements of activities were defined to serve as a basis for the survey. The following summary and conclusions are based

upon the data obtained from the analysis of eight economic geography workbooks.

Summary and Conclusions

1. The majority of the workbook authors favor the use of the completion exercise over all other activities. This type is represented in seven out of eight workbooks for a total of approximately 36 per cent of all the activities. Since the completion exercise requires little critical thinking, the high number of activities devoted to this type of exercise is questionable.
2. Twenty-six per cent of the activities included in the workbooks were devoted to study questions which are considered essential elements in all of the workbooks analyzed. Study questions appear to be desirable elements and represent the author-to-pupil guide to effective, economical learning.
3. The listing of names, objects, products, and places were third in frequency rating and represent nine per cent of the total activities scored. A large percentage of this type of activity is not considered conducive to good study habits as pure memory work and routine copying without reasoning is encouraged.

4. Map exercises appeared in eight workbooks and the average of 46 exercises per book indicates that this important aspect is valued highly by all of the authors whose workbooks were analyzed in this study.
5. Graph exercises appeared 278 times in eight workbooks, but the range (9-124) indicates that several authors do not place very much emphasis upon this essential phase of teaching economic geography.
6. Exercises concerned with diagrams appeared in only two of the eight workbooks analyzed, indicating that the remaining authors do not regard diagrams as important in the study of economic geography. Additional diagrams should be included in every unit of study.
7. Photographs appeared in only two of the eight workbooks analyzed. More consideration should be given to photographs as aids to economical, effective learning.
8. Class reports appear in six of the eight workbooks analyzed. This appears to be one area that could be easily supplemented by individual teachers.
9. Charts were scored infrequently for an average of six per workbook analyzed. Whether this is an indication of a trend away from the presentation of a mass of figures or authors neglect to present statistical



data is uncertain, but it appears that charts should be used frequently in conjunction with graph exercises to enable students to better understand the resources of their own and other countries.

10. True-false items and multiple-response items appeared very infrequently. This seems to be a desirable situation in that such items should be included as testing material and not study material.
11. General activities were not found often indicating preference to more standardized activities such as completion exercises, study questions, and listing exercises.
12. The authors whose workbooks were analyzed in this study favored the use of completion items, study questions, and listing exercises. Beyond these three most prominent activities, the authors disagree widely as to what constitutes an effective workbook for high school students of economic geography.

Recommendations for Further Study

Through an analysis of the data obtained from the survey of the activities of eight economic geography workbooks, a research study concerned with economic geography workbooks was suggested to the writer as being worthy of research. A

time-analysis study should be made to bring out the differences in the relative amount of time that it requires high school students of economic geography to perform different activities, such as map completion and study questions.

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